E450dn

User's Guide



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Safety information

- Connect the power cord to a properly grounded electrical outlet that is near the product and easily accessible.

CAUTION: Do not set up this product or make any electrical or cabling connections, such as the power cord or telephone, during a lightning storm.

- Refer service or repairs, other than those described in the operating instructions, to a professional service person.
- This product is designed, tested, and approved to meet strict global safety standards with the use of specific Lexmark components. The safety features of some parts may not always be obvious. Lexmark is not responsible for the use of other replacement parts.
- Your product uses a laser.

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- Your product uses a printing process that heats the print media, and the heat may cause the media to release emissions. You must understand the section in your operating instructions that discusses the guidelines for selecting print media to avoid the possibility of harmful emissions.
- Refer service or repairs, other than those described in the operating instructions, to a professional service person.
- This product is designed, tested, and approved to meet strict global safety standards with the use of specific Lexmark components. The safety features of some parts may not always be obvious. Lexmark is not responsible for the use of other replacement parts.

Contents

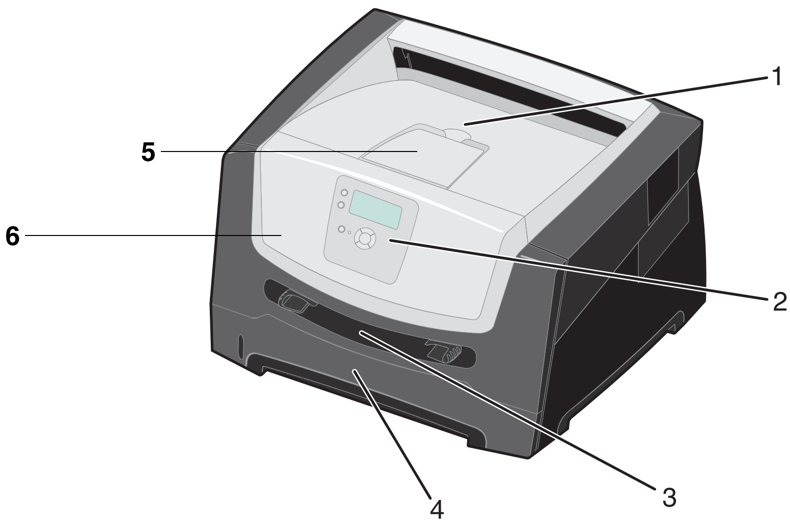
1 Learning about the printer

Printer overview

CAUTION: Do not set up this product or make any electrical or cabling connections, such as the power cord or telephone, during a lightning storm.

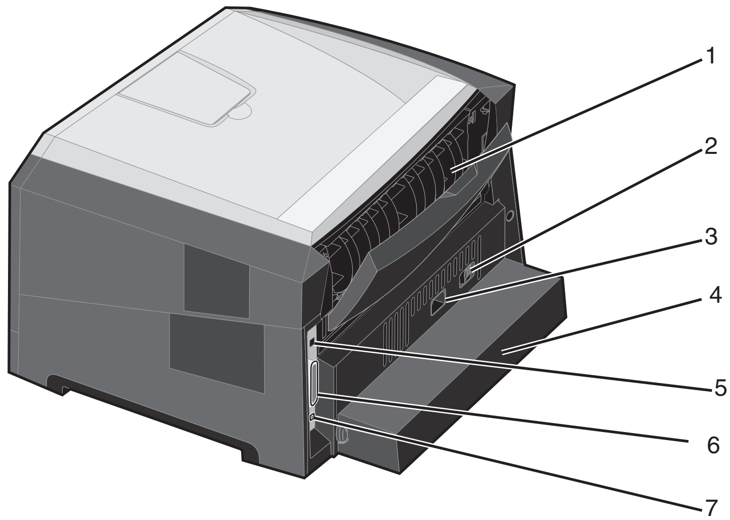
Basic model

The following illustration shows a printer with its base features.



1	150-sheet output bin	**4**	250-sheet tray
2	Control panel and navigation buttons	**5**	Paper support
3	Manual feeder	**6**	Front door

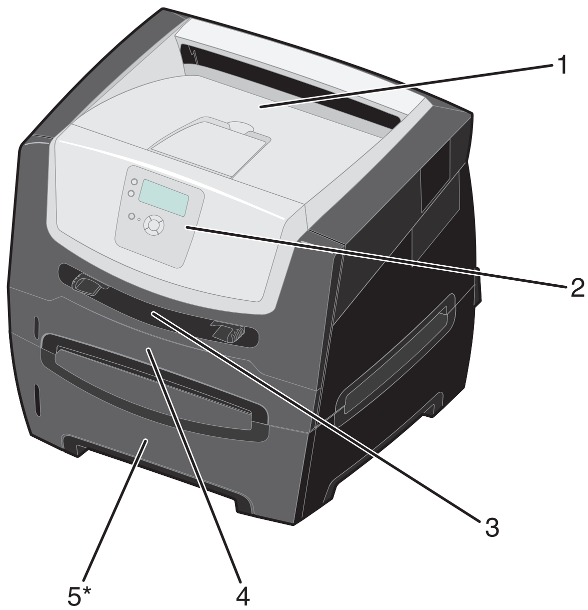
The following illustration shows a rear view of the printer with its base features.



1	Rear paper exit	**5**	USB connect
2	Power button	**6**	Parallel connect
3	Power connect	**7**	Ethernet connect
4	Dust cover (not available for some models)		

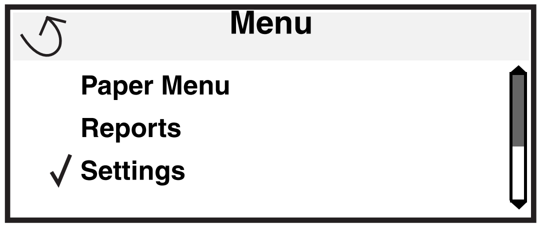
Configured model

The following illustration shows a fully configured printer. Items denoted with an asterisk (*) are options.



1	150-sheet output bin	**4**	250-sheet tray
2	Control panel and navigation buttons	**5**	550-sheet drawer (optional)
3	Manual feeder		

A number of menus are available to make it easy for you to change printer settings. The diagram shows the menu index on the control panel and the menus and items available under each menu. For more information about menus and menu items, see the *Menus and Messages* book on the Software and Documentation CD.



Paper Menu
- Default Source
- Paper Size/Type
- Substitute Size
- Paper Texture
- Paper Weight
- Paper Loading
- Custom Types
- Universal Setup

Reports
- Menu Settings Page
- Device Statistics
- Network Setup Page
- Profiles List
- Print Fonts
- Print Demo

Settings
- Setup Menu
- Finishing Menu
- Quality Menu
- Utilities Menu
- PDF Menu
- PostScript Menu
- PCL Emul Menu

Network/Ports
- TCP/IP
- Standard Network
- Standard USB
- Parallel
- AppleTalk

Security
- Job Expiration

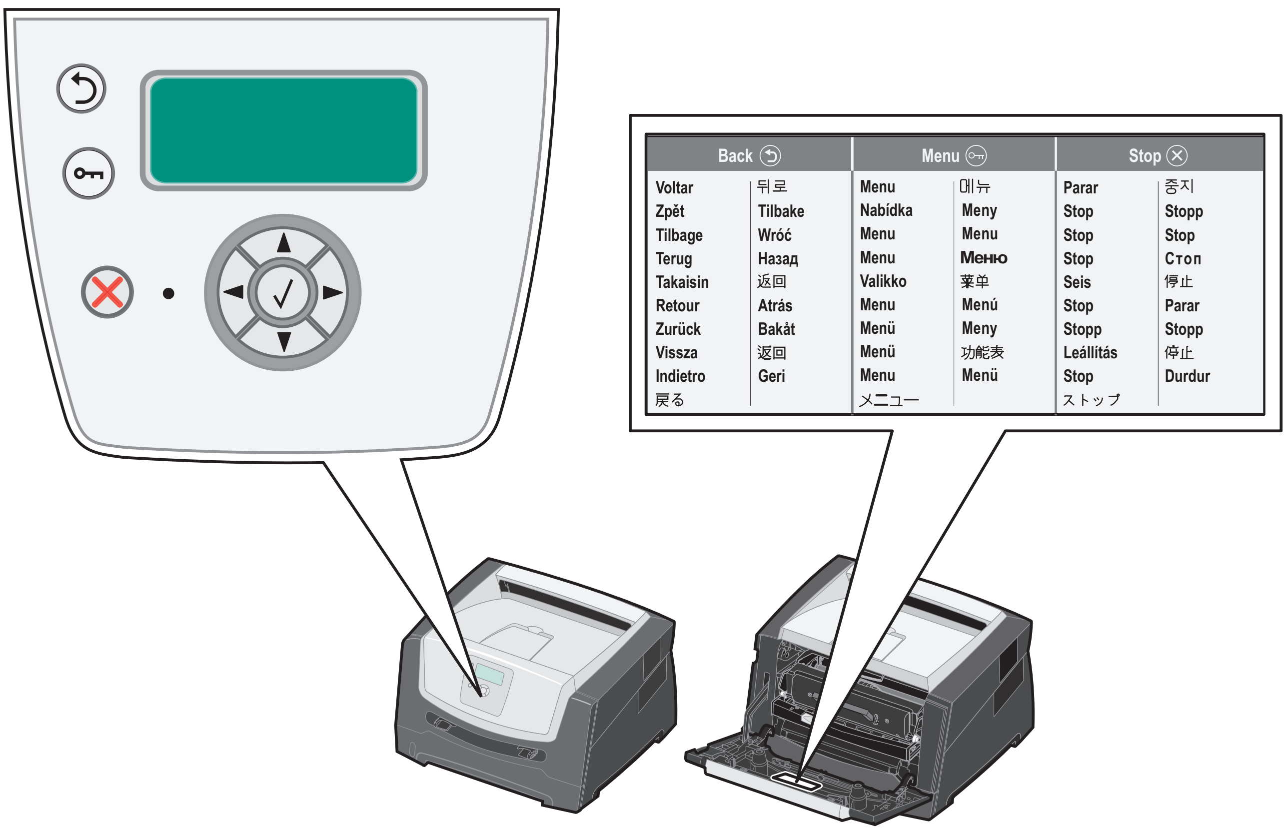
Help
- Printing Guide
- Supplies Guide
- Media Guide
- Print Defects
- Menu Map
- Information Guide
- Connection Guide
- Moving Guide

Understanding the control panel

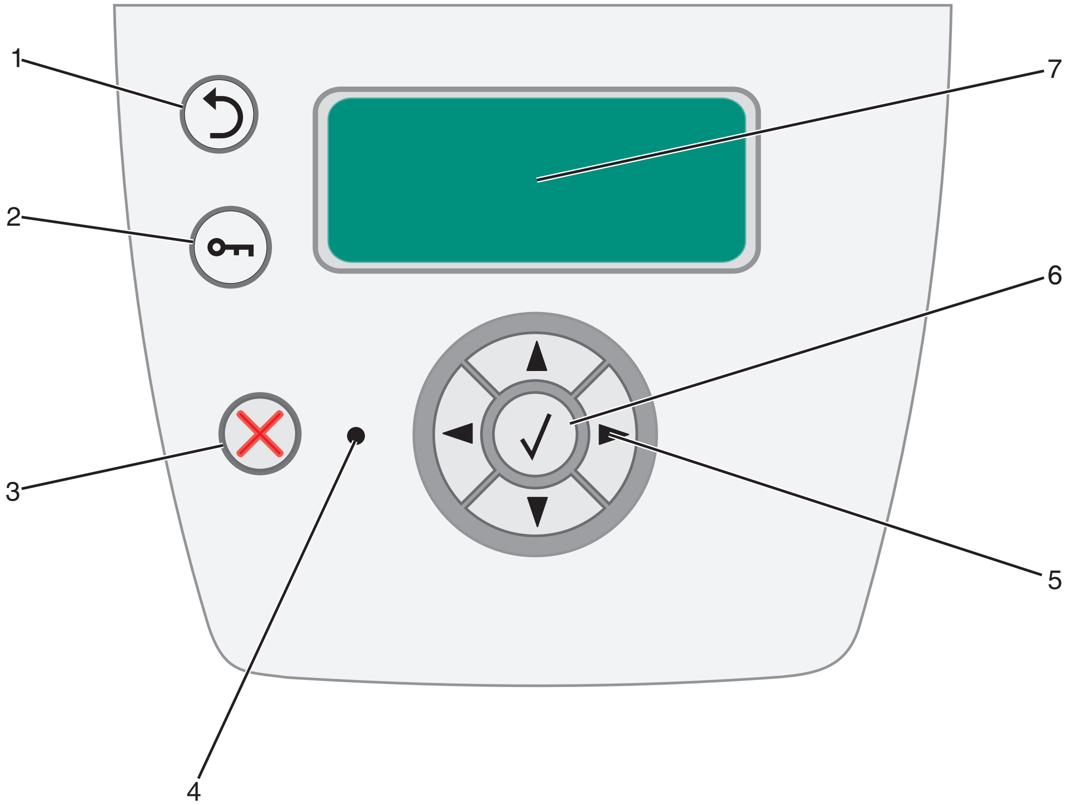
The control panel consists of these items:

- A 4-line, liquid crystal display (LCD) that can show both graphics and text
- Eight buttons: Back, Menu, Stop, Select (✓), ▲, ▼, ▶, and ◀
- Indicator light

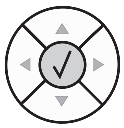
Note: A label located on the inside front door shows the control panel buttons in your language. An additional translated label is included in the printer box.



The use of the buttons and the layout of the display panel are described in the following table.



<table>
<tr><th>Button or control panel item</th><th>Function</th></tr>
<tr><td>1 Back </td><td>Press the Back button to return to the last screen you viewed.
Note: Changes made on a screen will not be applied if you press the Back button.</td></tr>
<tr><td>2 Menu </td><td>Press the Menu button to open the menu index.
Note: The printer must be in the <code>Ready</code> state to access the menu index. A message indicating the menus are unavailable will appear if the printer is not ready.</td></tr>
<tr><td>3 Stop </td><td>Press the Stop button to stop the mechanical operation of the printer. After pressing Stop, the message <code>Stopping</code> appears. When the printer has stopped, the status line in the control panel will show <code>Stopped</code>, and a list of options will appear.</td></tr>
<tr><td>4 Indicator light</td><td>A two-toned LED is used on the control panel, one color being green and the other being red. The lights indicate whether the printer power is on, the printer is busy, idle, processing a job, or requires operator intervention.
<table>
<tr><th>Status</th><th>Indicates</th></tr>
<tr><td>Off</td><td>Power is off.</td></tr>
<tr><td>Solid green</td><td>Printer is on, but idle.</td></tr>
<tr><td>Flashing green</td><td>Printer is warming up, processing data, or printing a job.</td></tr>
<tr><td>Solid red</td><td>Operator intervention is required.</td></tr>
</table></td></tr>
</table>

Button or control panel item	Function	
5 and 6 Navigation buttons 	▲ ▼	The Up and Down buttons are used to move up or down lists. When navigating through a list using the **Up** or **Down** button, the cursor moves one line at a time. Pressing the **Down** button at the bottom of the screen changes the screen to the next whole page.
	◀ ▶	The Left or Right buttons are used to move within a screen such as moving from one menu index item to another. They are also used to scroll through text that will not fit on the screen.
		The Select button is used to initiate action on a selection. Press **Select** when the cursor appears next to the selection you want such as following a link, submitting a configuration item, or when you want to start or cancel a job.
7 Display	The display shows messages and graphics describing the current state of the printer and indicating possible printer problems you must resolve. The top line of the display is the header line. If applicable, it will contain the graphic indicating the **Back** button can be used. It will also display the current status and the Supplies (Warnings) status. If multiple warnings are present, each warning will be separated by a comma. The other three lines of the display are the body of the screen. This is where you view printer status, supplies messages, show-me screens, and make selections.	

2 Understanding print media guidelines

Print media is paper, card stock, transparencies, labels, and envelopes. The last four are sometimes referred to as *specialty media*. The printer provides high-quality printing on a variety of media. A number of things must be considered concerning media before printing. This chapter provides information on making media selections and caring for media.

- **What types of print media can be loaded?**
- **Tips on choosing the right print media**
- **Storing print media**
- **Avoiding jams**

For more details about the types of paper and specialty media your printer supports, see the *Card Stock & Label Guide* available on our Lexmark Web site at **www.lexmark.com**.

We recommend that you try a limited sample of any paper or specialty media you are considering using with the printer before purchasing large quantities.

What types of print media can be loaded?

Get the most from your printer by properly loading the trays. Never mix media types within a tray.

Source	Sizes	Types	Weight	Capacity[*] (sheets)
250-sheet tray	A4, A5, A6 (grain long only), JIS B5, letter, legal, executive, folio, statement	Plain paper, bond, letterhead, transparencies, paper labels (single-sided only)	60–90 g/m^2 (16–24 lb)	• 250 paper • 50 labels • 50 transparencies
550-sheet drawer (optional)	A4, A5, JIS B5, letter, legal, executive, folio, statement	Plain paper, bond, letterhead, transparencies, paper labels (single-sided only)	60–90 g/m^2 (16–24 lb)	• 550 paper • 50 labels • 50 transparencies
Manual feeder	A4, A5, A6 (grain long only), JIS B5, letter, legal, executive, folio, statement, Universal[‡]	Plain paper, transparencies, paper labels (single-sided only)	60–163 g/m^2 (16–43 lb)	1
		Card stock[†]	• 120–163 g/m^2 (66–90 lb) Index Bristol • 75–163 g/m^2 (46–100 lb) Tag	
	7¾, 9, 10, DL, C5, B5	Envelopes	75 g/m^2 (20 lb)	

* Capacity for 20 lb print media, unless otherwise noted.

† Grain short is recommended. Use rear exit for best results.

‡ Universal size ranges:
– **Manual feeder**: 76–216 x 127–356 mm (3.0–8.5 x 5.0–14.0 in.) (includes 3 x 5 in. cards)

Tips on choosing the right print media

Selecting the right paper or other print media reduces printing problems. For best print quality, try a sample of the paper or other print media you are considering before buying large quantities.

Note: Certain paper types will not print at maximum speed.

See the *Card Stock & Label Guide* available on our Lexmark Web site at **www.lexmark.com/publications** for more information about which print media provides optimum results for your printing environment.

Paper

- For the best print quality, use 20 lb (75 g/m^2) xerographic, grain long paper.

  The printer can automatically feed paper weights from 60 to 90 g/m^2 (16 to 24 lb bond) grain long. Paper lighter than 60 g/m^2 (16 lb) might not be stiff enough to feed properly, causing jams. Paper heavier than 90 g/m^2 (24 lb) should be fed through the manual feeder.
- The laser printing process heats paper to high temperatures of 210°C (410°F). Use only paper able to withstand these temperatures without discoloring, bleeding, or releasing hazardous emissions. Check with the manufacturer or vendor to determine whether the paper you have chosen is acceptable for laser printers.
- The duplex unit only supports certain sizes and types of print media. Only A4, letter, legal and folio size paper can be used for duplex printing. The printer does not support duplex printing on any other type of print media.

Paper characteristics

The following paper characteristics affect print quality and reliability. It is recommended that these guidelines are followed when evaluating new paper stock.

For detailed information, see the *Card Stock & Label Guide* available on the Lexmark Web site at **www.lexmark.com/ publications**.

Weight

The printer can automatically feed paper weights from 60 to 90 g/m^2 (16 to 24 lb bond) grain long in the integrated and optional trays and paper weights from 60 to 163 g/m^2 (16 to 43 lb bond) grain long in the manual feeder. Paper lighter than 60 g/m^2 (16 lb) might not be stiff enough to feed properly, causing jams. For best performance, use 75 g/m^2 (20 lb bond) grain long paper. To use paper narrower than 182 x 257 mm (7.2 x 10.1 in.), it is recommended that the weight be equal to 90 g/m^2 (24 lb bond).

Curl

Curl is the tendency of media to curve at its edges. Excessive curl can cause paper feeding problems. Curl can occur after the paper passes through the printer, where it is exposed to high temperatures. Storing paper unwrapped in hot, humid, cold and dry conditions, even in the trays, can contribute to paper curling prior to printing and can cause feeding problems.

Smoothness

The degree of smoothness of paper directly affects print quality. If the paper is too rough, the toner does not fuse to the paper properly, resulting in poor print quality. If the paper is too smooth, it can cause paper feeding or print quality issues. Smoothness needs to be between 100 and 300 Sheffield points; however, smoothness between 150 and 250 Sheffield points produces the best print quality.

Moisture content

The amount of moisture in the paper affects both print quality and the ability of the printer to feed the paper properly. Leave the paper in its original wrapper until it is time to use it. This limits the exposure of the paper to moisture changes that can degrade its performance.

Condition paper while it is still in the original wrapper. To condition it, store it in the same environment as the printer for 24 to 48 hours before printing to let the paper stabilize in the new conditions. Extend the time several days if the storage or transportation environment is very different from the printer environment. Thick paper may also require a longer conditioning period because of the mass of material.

Grain direction

Grain refers to the alignment of the paper fibers in a sheet of paper. Grain is either *grain long*, running the length of the paper, or *grain short*, running the width of the paper.

For 60 to 90 g/m^2 (16 to 24 lb bond) paper, grain long fibers are recommended.

Fiber content

Most high-quality xerographic paper is made from 100% chemically pulped wood. This content provides the paper with a high degree of stability resulting in fewer paper feeding problems and better print quality. Paper containing fibers such as cotton possess characteristics that can result in degraded paper handling.

Recycled paper

Lexmark supports US executive order 13101 which strongly encourages the use of recycled papers in government agencies. Ask for warranty information and performance claims from your paper supplier, and/or test small quantities before buying large amounts. A list of suppliers and approved papers used by the US Government Printing Office can be found at http://www.gpo.gov/qualitycontrol/cpypaper.htm.

Unacceptable paper

The following papers are not recommended for use with the printer:

- Chemically treated papers used to make copies without carbon paper, also known as carbonless papers, carbonless copy paper (CCP), or no carbon required (NCR) paper
- Preprinted papers with chemicals that may contaminate the printer
- Preprinted papers that can be affected by the temperature in the printer fuser
- Preprinted papers that require a *registration* (the precise print location on the page) greater than ±0.09 in., such as optical character recognition (OCR) forms

  In some cases, you can adjust registration with your software application to successfully print on these forms.
- Coated papers (erasable bond), synthetic papers, thermal papers
- Rough-edged, rough or heavily textured surface papers or curled papers
- Recycled papers containing more than 25% post-consumer waste that do not meet DIN 19 309
- Recycled paper having a weight less than 60 g/m^2 (16 lb)
- Multiple-part forms or documents

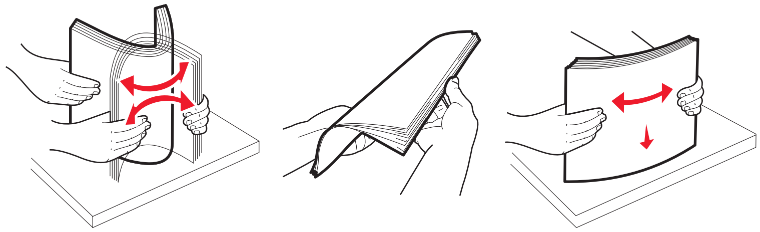
Selecting paper

Proper paper loading helps prevent jams and ensures trouble-free printing.

To help avoid jams or poor print quality:

- *Always* use new, undamaged paper.
- Before loading paper, know the recommended print side of the paper. This information is usually indicated on the paper package.
- *Do not* use paper that has been cut or trimmed by hand.
- *Do not* mix media sizes, weights, or types in the same source; mixing results in jams.
- *Do not* use coated papers unless they are specifically designed for electrophotographic printing.
- *Do not* remove trays while a job is printing or `Busy` appears on the control panel.

- Make sure the Paper Type, Paper Texture, and Paper Weight settings are correct. (See “Paper Menu” in the *Menus and Messages Guide* located on the Software and Documentation CD for detailed information about these settings.)
- Make sure the paper is properly loaded in the source.
- Flex paper back and forth, and then fan. Do not fold or crease the paper. Straighten the edges on a level surface.



Selecting preprinted forms and letterhead

Use the following guidelines when selecting preprinted forms and letterhead paper for the printer:

- Use grain long papers for best results for 60 to 90 g/m^2 weights.
- Use only forms and letterhead printed using an offset lithographic or engraved printing process.
- Avoid papers with rough or heavily textured surfaces.

Use papers printed with heat-resistant inks designed for use in xerographic copiers. The ink must withstand temperatures of 210°C (410°F) without melting or releasing hazardous emissions. Use inks that are not affected by the resin in toner. Inks that are oxidation-set or oil-based should meet these requirements; latex inks might not. When in doubt, contact the paper supplier.

Preprinted papers such as letterhead must be able to withstand temperatures up to 210°C (410°F) without melting or releasing hazardous emissions.

Printing on letterhead

Check with the manufacturer or vendor to determine whether the chosen preprinted letterhead is acceptable for laser printers.

Page orientation is important when printing on letterhead. Use the following table for help when loading letterhead in the media sources.

Media source or process	Print side	Top of page
250-sheet tray and 550-sheet drawer	Printed letterhead facedown	The top edge of the sheet with the logo is placed at the front of the tray.
Duplex (two-sided) printing from trays	Printed letterhead face up	The top edge of the sheet with the logo is placed at the front of the tray.
Manual feeder	Printed letterhead faceup	The top edge of the sheet with the logo enters the printer first.
Duplex (two-sided) printing from Manual feeder	Printed letterhead face down	The top edge of the sheet with the logo enters the printer first.

Transparencies

Feed transparencies from the 250-sheet tray or the manual feeder. Try a sample of any transparencies being considered for use with the printer before buying large quantities.

When printing on transparencies:

- Be sure to set the Paper Type to Transparency from the printer driver or from MarkVision™ Professional to avoid damaging the printer.
- Use transparencies designed specifically for laser printers. Transparencies must be able to withstand temperatures of 175°C (350°F) without melting, discoloring, offsetting or releasing hazardous emissions.
- To prevent print quality problems, avoid getting fingerprints on the transparencies.
- Before loading transparencies, fan the stack to prevent sheets from sticking together.

Selecting transparencies

The printer can print directly on transparencies designed for use in laser printers. Print quality and durability depend on the transparency used. Always print samples on the transparencies being considered for use before buying large quantities.

We recommend Lexmark part number 70X7240 letter size transparency and Lexmark part number 12A5010 for A4 size transparency.

The Paper Type setting should be set to Transparency to help prevent jams. (See "Paper Type" on the publications CD for detailed information about this setting.) Check with the manufacturer or vendor to determine whether the transparencies are compatible with laser printers that heat transparencies to 175°C (350°F). Use only transparencies that are able to withstand these temperatures without melting, discoloring, offsetting, or releasing hazardous emissions. For detailed information, see the *Card Stock & Label Guide*, which is available on the Lexmark Web site at **www.lexmark.com/publications**.

Transparencies can be fed automatically from the paper trays or manually from the manual feeder. See **What types of print media can be loaded? on page 12** for information about transparency compatibility with input bins.

Be careful when you handle transparencies. Fingerprints on the surface of the transparency cause poor print quality.

Envelopes

Try a sample of any envelope you are considering using with the printer before buying large quantities. See **Loading the manual feeder on page 23** for instructions on loading envelopes.

When printing on envelopes:

- To achieve the best possible print quality, use only high-quality envelopes that are designed for use in laser printers.
- Set the Paper Source in the Paper menu to manual, set the Paper Type to Envelope, and select the correct envelope size from the control panel, the printer driver, or from MarkVision Professional.
- For best performance, use envelopes made from 90 g/m^2 (24 lb bond) paper. Use up to 105 g/m^2 (28 lb bond) weight for the manual feeder as long as the cotton content is 25% or less. Envelopes with 100% cotton content must not exceed 90 g/m^2 (24 lb bond) weight.
- Use only new, undamaged envelopes.
- For best performance and to minimize jams, do not use envelopes that:
  - Have excessive curl or twist.
  - Are stuck together or damaged in any way.
  - Contain windows, holes, perforations, cutouts or embossing.
  - Use metal clasps, string ties, or metal folding bars.
  - Have an interlocking design.
  - Have postage stamps attached.
  - Have any exposed adhesive when the flap is in the sealed or closed position.
  - Have nicked edges or bent corners.
  - Have rough, cockle, or laid finishes.
- Use envelopes that can withstand temperatures of 175°C (350°F) without sealing, excessive curling, wrinkling, or releasing hazardous emissions. If you have any doubts about the envelopes you are considering using, check with the envelope supplier.
- Adjust the width guide to fit the width of the envelope.
- Load only one envelope at a time.
- A combination of high humidity (over 60%) and the high printing temperatures may seal the envelopes.

Labels

The printer can print on many labels designed for use with laser printers, except for vinyl labels. These labels are supplied in letter size, A4 size, and legal size sheets. Label adhesives, face sheet (printable stock), and topcoats must be able to withstand temperatures of 210°C (410°F) and pressure of 25 pounds per square inch (psi).

Try a sample of any label you are considering using with the printer before purchasing a large quantity.

For detailed information on label printing, characteristics, and design, see the *Card Stock & Label Guide* available on the Lexmark Web site at **www.lexmark.com/publications**.

When printing on labels:

- Set the Paper Type menu item to Labels in the Paper menu. Set the Paper Type from the printer control panel, the printer driver, or from MarkVision Professional.
- Do not load labels together with paper or transparencies in the same source; mixing media can cause feeding problems.
- Do not use label sheets with a slick backing material.
- Do not use vinyl labels.
- Use full label sheets. Partial sheets may cause labels to peel off during printing, resulting in a jam. Partial sheets also contaminate the printer and the cartridge with adhesive, and could void the printer and cartridge warranties.
- Use labels that can withstand temperatures of 210°C (410°F) without sealing, excessive curling, wrinkling, or releasing hazardous emissions.
- Do not print within 1 mm (0.04 in.) of the edge of the label, of the perforations, or between die-cuts of the label.
- Do not use label sheets that have adhesive to the edge of the sheet. Zone coating of the adhesive at least 1 mm (0.04 in.) away from edges is recommended. Adhesive material contaminates the printer and could void the warranty.
- If zone coating of the adhesive is not possible, remove a 3 mm (0.125 in.) strip on the leading and driver edge, and use a non-oozing adhesive.
- Remove a 3 mm (0.125 in.) strip from the leading edge to prevent labels from peeling inside the printer.
- Portrait orientation is preferred, especially when printing bar codes.
- Do not use labels that have exposed adhesive.

For detailed information on label printing, characteristics, and design, see the *Card Stock & Label Guide*, available on the Lexmark Web site at **www.lexmark.com/publications**.

Card stock

Card stock is single ply, and has a large array of properties, such as the moisture content, thickness, and texture, that can significantly affect print quality. For information on the preferred weight and for the grain direction of print media, see **What types of print media can be loaded? on page 12**.

Try a sample of any card stock you are considering using with the printer before purchasing a large quantity.

When printing on card stock:

- Cardstock can only be printed from the Manual Feeder.
- Set the Paper Type menu item in the Paper Menu to Card Stock from the control panel, from the printer driver, or from MarkVision Professional. Set the Paper Weight to CardStock Weight, and select the CardStock Weight as Normal or Heavy for the value. Set this from the control panel, the printer driver, or from MarkVision Professional. Use Heavy for card stock weighing more than or heavier than 163 g/m^2 (90 lb).
- Be aware that preprinting, perforation, and creasing can significantly affect the print quality and cause media handling or jamming problems.
- Avoid using card stock that may release hazardous emissions when heated.

- Do not use preprinted card stock manufactured with chemicals that may contaminate the printer. Preprinting introduces semi-liquid and volatile components into the printer.
- The use of grain short card stock is recommended.

Storing print media

Use the following guidelines to avoid paper feeding problems and uneven print quality.

- For best results, store media in an environment where the temperature is approximately 21°C (70°F) and the relative humidity is 40%.

  Most label manufacturers recommend printing in a temperature range of 18 to 24°C (65 to 75°F) with a relative humidity of 40 to 60%.
- Store cartons of media on a pallet or shelf, rather than directly on the floor.
- When storing individual packages of media out of the original carton, make sure they rest on a flat surface so the edges do not buckle or curl.
- Do not place anything on top of the media packages.
- Store paper in its original wrapper until you load it into the printer.

Avoiding jams

Use appropriate print media (paper, transparencies, labels, and card stock) to help ensure trouble-free printing. See **What types of print media can be loaded? on page 12** for more information.

Note: Try a limited sample of any print media you are considering using with the printer before purchasing large quantities.

By selecting the appropriate print media and loading it properly, you can avoid most jams. For detailed tray loading instructions, see the following:

- **Loading the 250-sheet tray on page 19**
- **Loading the manual feeder on page 23**

The following hints can help you avoid jams:

- Use only recommended print media.
- Do not overload the print media sources. Make sure the stack height does not exceed the maximum height indicated by the stack line on the labels in the sources.
- Do not load wrinkled, creased, damp, or curled print media.
- Flex, fan, and straighten print media before you load it. If jams do occur with print media, try feeding one sheet at a time through the manual feeder.
- Do not use print media that you have cut or trimmed yourself.
- Do not mix print media sizes, weights, or types in the same print media source.
- Make sure the recommended print side is loaded in the source according to your simplex or duplex needs.
- Keep print media stored in an acceptable environment. See **Storing print media on page 18**.
- Do not remove trays during a print job.
- Push all trays in firmly after loading them.
- Make sure the guides in the trays are properly positioned for the size of print media you have loaded. Make sure the guides are not placed too tightly against the stack of print media.

3 Printing

This chapter covers information about loading print media, sending a job to print, canceling a print job, printing a menu settings page, and printing a font list. For tips on paper jam prevention and print media storage, see **Avoiding jams on page 18** or **Storing print media on page 18**.

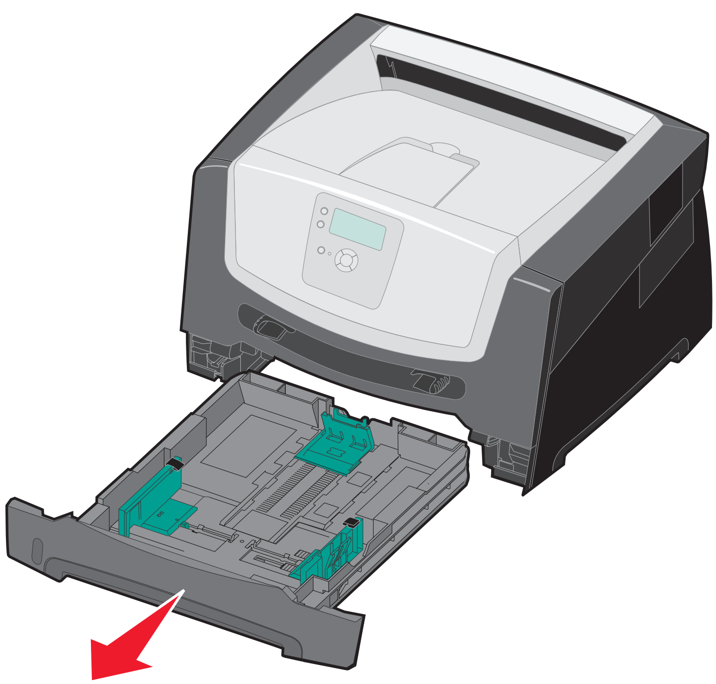
Loading the 250-sheet tray

Your printer has a 250-sheet tray. You may have also purchased an optional 550-sheet drawer. Print media is loaded into both components the same way.

To load print media:

Note: Do not remove a tray when a job is printing or when the control panel indicator light is blinking. Doing so may cause a jam.

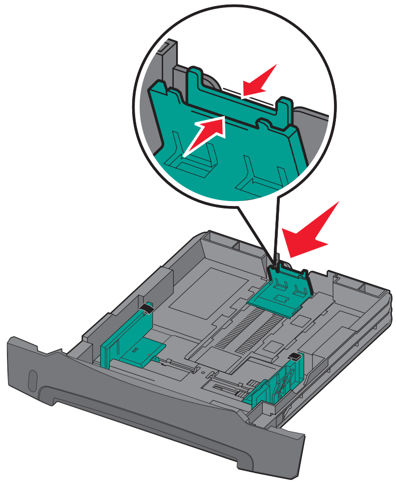
1 Remove the tray.



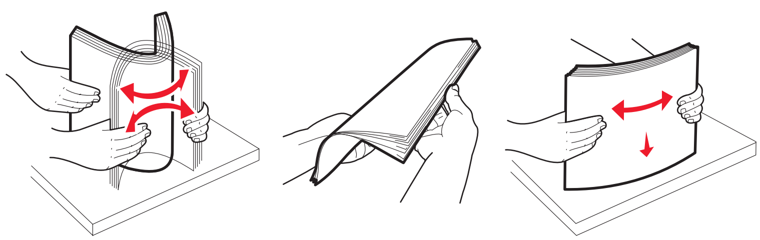
Note: To load legal or folio size paper, extend the length of the paper tray. See **Extending the tray for legal or folio size paper on page 22** for instructions.

2 Squeeze the side guide tab, and slide the guide to the outside of the tray.

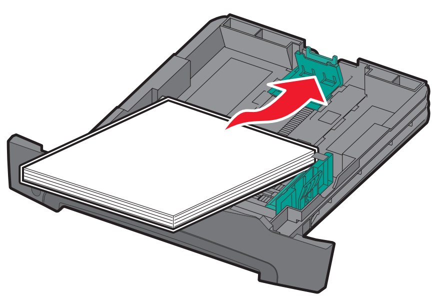
3 Squeeze the rear guide tab, and slide the guide to the correct position for the size media you are loading.



4 Flex the sheets back and forth to loosen them, then fan them. Do not fold or crease the print media. Straighten the edges on a level surface.



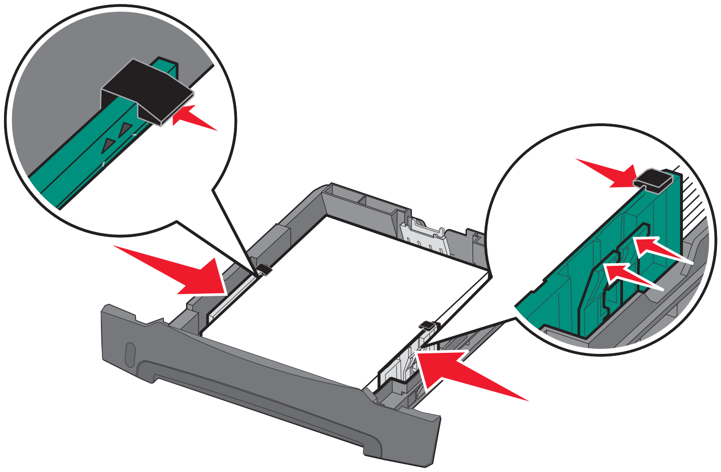
5 Load print media in the tray.



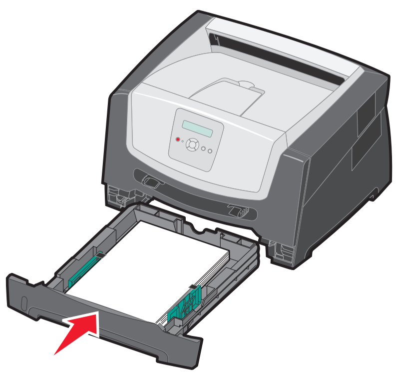
Note: Load letterhead paper with the design side facing down. The top edge of the sheet with the logo should be placed at the front of the tray.

Make sure the print media is below the paper fill indicator on the side guides. Overloading may cause jams.

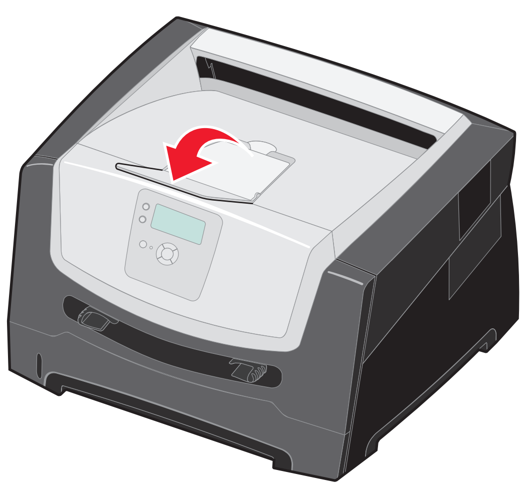
6 Pinch the side guide tab, and slide the guide until it lightly rests against the edge of the media.



7 Insert the tray.



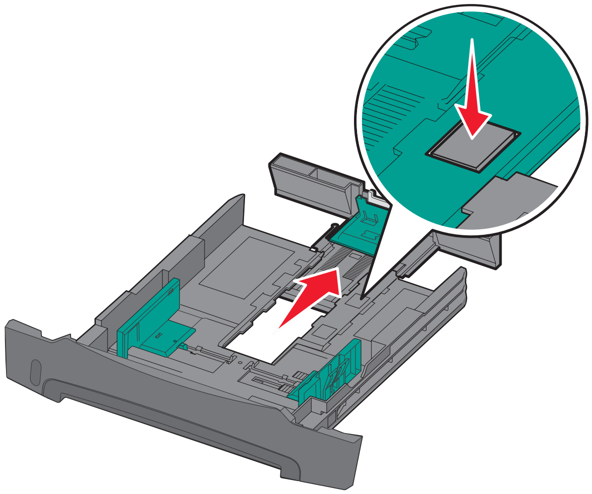
8 Extend the paper support on the output bin.



Extending the tray for legal or folio size paper

To load legal or folio size paper, extend the paper tray. You may also attach a dust cover (not available for all models) on the back of the printer to protect the tray while it is extended.

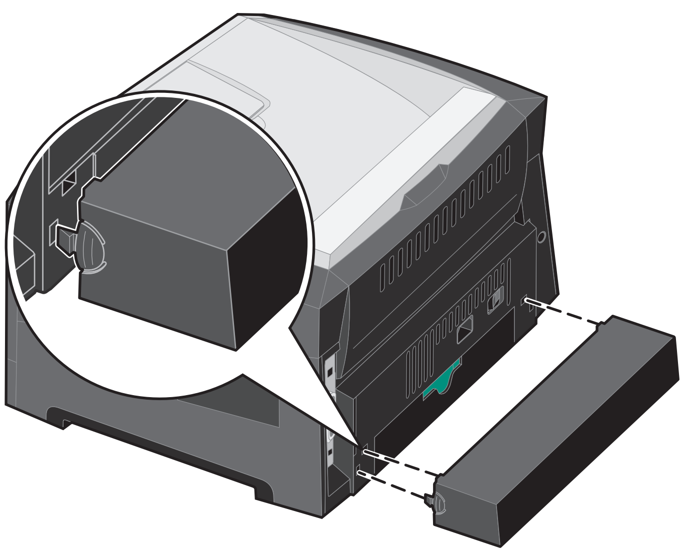
1 Press down on the latch at the back of the tray.
2 Expand the tray until the extender locks into place.



Attaching the dust cover

The dust cover helps protect the paper tray from the environment. It also keeps the tray from being knocked out of position while it is extended.

Note: This feature may not be available for all models.



Attach the dust cover (if available) to the back of the printer by aligning the tabs on the cover to the holes on the printer, then *snap* the cover into place.

Loading the manual feeder

The manual feeder can feed different types of print media, such as a transparency, postcard, note card, or envelope. It can be used for single-page printing only.

To load print media:

Note: Do not add or remove print media when the printer is printing from the manual feeder or when the control panel indicator light is blinking. Doing so may cause a jam.

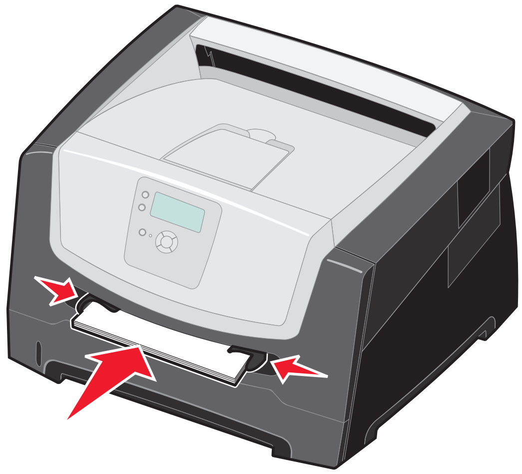
1. Slide the width guides to the outside of the feeder.



2. Place a sheet of the selected print media, print side facing up, at the center fo the manual feeder, but only to the point where its leading edge can contact the paper guides. Load one sheet of the media in the feeder.
   - Hold transparencies by the edges and avoid touching the print side.
   - Insert envelopes with the flap side face down.
   - Load letterhead faceup, with the top of the sheet entering first.
   - If you experience problems with paper feed, turn the paper over.



3 Slide the width guides until they lightly rest against the edge of the media.



4 Hold both sides of the print media close to the manual feeder, and push it into the printer until it automatically engages.

There is a brief pause between the time the printer engages the print media and when it feeds into the printer.

Warning: Do not force the print media into the feeder. Forcing the media causes jams.

5 Set the Paper Size and Paper Type for the manual feeder (Manual Feeder Size and Manual Feeder Type) to the correct value for the print media you loaded.

a Press ⊶ on the control panel.

b Press ▼ until √ `Paper Menu` appears, and then press ✓.

c Press ▼ until √ `Paper Size/Type` appears, and then press ✓.

d Press ▼ until √ `Manual Paper Size/Type` or `Manual Env Size/Type` appears, and then press ✓.

e Press ▼ until the √ appears next to the media size you loaded, and then press ✓.

f Press ▼ until the media type you loaded appears, and then press ✓.

g Press ⟲ repeatedly to return to the `Ready` state.

Linking trays

Tray linking enables the automatic linking feature for trays when you load the same size and type of print media in multiple sources.

For example, if you have the same size and type of print media loaded in the paper tray and the optional paper drawer, the printer selects print media from the paper tray until it becomes empty, and then the printer automatically feeds print media from the next linked source—the optional drawer.

If you load the same size print media in each paper source, make sure the paper type is all the same type in order to link the trays.

To set the paper type or size:

1. Press on the control panel.
2. Press ▼ until √ `Paper Menu` appears, and then press .
3. Press ▼ until √ `Paper Size/Type` appears, and then press .
4. Press ▼ until √ `Tray <x> Size/Type` appears, and then press .
5. Press ▼ until the √ appears next to the media size you loaded, and then press .
6. Press ▶ until the media type you loaded appears, and then press .
7. Press repeatedly to return to the `Ready` state.

Once the trays you selected are loaded with the same size and type of print media, select the same Paper Type setting in the Paper menu for these sources.

To disable tray linking, set the Paper Type to a unique value in each one of the trays. If all the trays do not have the same type of print media when they are linked, you could mistakenly print a job on the wrong paper type.

Sending a job to print

A printer driver is software that lets your computer communicate with your printer. When you choose **Print** from a software application, a window representing the printer driver opens. You can then select the appropriate settings for the specific job you are sending to the printer. Print settings selected from the driver override the default settings selected from the printer control panel.

You may need to click **Properties** or **Setup** from the initial Print box to see all of the available printer settings you can change. If you are not familiar with a feature in the printer driver window, open the online Help for more information.

To support all the printer features, use the Lexmark custom printer drivers supplied with your printer. Updated drivers, as well as a complete description of the driver packages and Lexmark driver support, are available from the Lexmark Web site. You can also use the system drivers built into your operating system.

To print a job from a typical Windows application:

1. Open the file you want to print.
2. From the “File” menu, select **Print**.
3. Select the correct printer in the dialog. Modify the printer settings as appropriate (such as the pages you want to print or the number of copies).
4. Click **Properties** or **Setup** to adjust printer settings that were not available on the first screen, and then click **OK**.
5. Click **OK** or **Print** to send the job to the selected printer.

Canceling a print job

There are several methods for canceling a print job.

- **Canceling a job from the printer control panel**
- **Canceling a job from a computer running Windows**
  - **Canceling a job from the taskbar**
  - **Canceling a job from the desktop**
- **Canceling a job from a Macintosh computer**
  - **Canceling a job from a Macintosh computer running Mac OS 9.x**
  - **Canceling a job from a Macintosh computer running Mac OS X**

Canceling a job from the printer control panel

Note: For more information about the control panel, see **Understanding the control panel on page 9**.

If the job you want to cancel is printing, and `Busy` appears on the display, press ▲ until √ `Cancel a job` appears, and then press ✓. The message `Canceling Job` appears until the job is canceled.

Canceling a job from a computer running Windows

Canceling a job from the taskbar

When you send a job to print, a small printer icon appears in the right corner of the taskbar.

1. Double-click the printer icon.

   A list of print jobs appears in the printer window.
2. Select the job you want to cancel.
3. Press the **Delete** key on the keyboard.

Canceling a job from the desktop

1. Minimize all programs to reveal the desktop.
2. Double-click the **My Computer** icon.
3. Double-click the **Printers** icon.

   A list of available printers appears.
4. Double-click the printer you selected when you sent the job.

   A list of print jobs appears in the printer window.
5. Select the job you want to cancel.
6. Press the **Delete** key on the keyboard.

Canceling a job from a Macintosh computer

Canceling a job from a Macintosh computer running Mac OS 9.x

When you send a job to print, the printer icon for your selected printer appears on the desktop.

1 Double-click the printer icon on your desktop.

A list of print jobs appears in the printer window.

2 Select the print job you want to cancel.

3 Click the trash can icon.

Canceling a job from a Macintosh computer running Mac OS X

1 Open **Applications** → **Utilities**, and then double-click **Print Center** or **Printer Setup**.

2 Double-click the printer you are printing to.

3 In the printer window, select the print job you want to cancel.

4 Press **Delete**.

Printing the menu settings page

You can print a menu settings page to review the default printer settings and to verify printer options are installed correctly.

1 Make sure the printer is on and `Ready`.

2 Press (Menu) on the control panel.

3 Press ▼ until √ `Reports` appears, and then press (√).

4 Press ▼ until √ `Menu Settings Page` appears, and then press (√).

`Printing Menus Settings` appears on the display.

The printer returns to the `Ready` state after the menu settings page prints.

Printing a network setup page

If the printer is attached to a network, print a network setup page on the printer to verify the network connection. This page also provides important information that helps in configuring for network printing.

1 Make sure the printer is on.

2 Press (Menu) on the control panel.

3 Press ▼ until √ `Reports` appears, and then press (√).

4 Press ▼ until √ `Network Setup Page` appears, and then press (√).

Note: If an optional internal print server is installed, `Print Net1 Setup` appears on the display.

5 Check the first section on the network setup page, and confirm that Status is “Connected.”

If Status is “Not Connected” the LAN drop may not be active, or the network cable may be malfunctioning. Consult a system support person for a solution, and print another network setup page to verify that the printer is connected to the network.

Printing a font sample list

To print samples of the fonts currently available for your printer:

1. Make sure the printer is on and the `Ready` message appears.
2. Press ⊶ on the control panel.
3. Press ▼ until √ `Reports` appears, and then press ✓.
4. Press ▼ until √ `Print Fonts` appears, and then press ✓.
5. Press ▼ until the √ appears next to `PCL Fonts`, or `PostScript Fonts`, and then press ✓.

Printing held jobs

Printing and deleting held jobs

Held jobs such as Verify Print, Reserve Print, Repeat Print, and Bookmarks differ in function. These jobs are printed or deleted from the printer control panel.

Verify Print

If you send a Verify Print job, the printer prints one copy and holds the remaining copies you requested in printer memory. Use Verify Print to examine the first copy to see if it is satisfactory before printing the remaining copies. Once all copies are printed, the Verify Print job is automatically deleted from printer memory.

Reserve Print

If you send a Reserve Print job, the printer does not print the job immediately. It stores the job in memory so you can print the job later. The job is held in memory until you delete it from the Held Jobs menu. Reserve Print jobs may be deleted if the printer requires extra memory to process additional held jobs.

Repeat Print

If you send a Repeat Print job, the printer prints all requested copies of the job *and* stores the job in memory so you can print additional copies later. You can print additional copies as long as the job remains stored in memory.

Note: Repeat Print jobs are automatically deleted from printer memory when the printer requires extra memory to process additional held jobs.

Windows

1. From a word processor, spreadsheet, browser, or other application, select **File** → **Print**.
2. Click **Properties**. (If there is no Properties button, click **Setup**, and then click **Properties**.)
3. Depending on the operating system, you may have to click the **Other Options** tab, and then click **Print and Hold**.

   Note: If you have difficulty finding Print and Hold → Held Jobs, click **Help**, and see the topic Held Jobs or Print and Hold, then follow the driver instructions.

4. Select the type of held job you want, and then send your job to the printer.

   Go to the printer when you are ready to retrieve your print job, and follow the **At the printer** steps on **page 29**.

Macintosh

1. From a word processor, spreadsheet, browser, or other application, select **File** → **Print**.
2. In the **Copies & Pages** or **General** pop-up menu, select **Job Routing**.
   a. When using Mac OS 9, if Job Routing is not a choice on the pop-up menu, select **Plug-in Preferences** → **Print Time Filters.**
   b. Turn down the disclosure triangle to the left of **Print Time Filters**, and select **Job Routing**.
   c. In the pop-up menu, select **Job Routing**.
3. In the radio group, select the type of held job you want, enter a user name, and then send your job to the printer.

   Go to the printer when you are ready to retrieve your print job, and follow the **At the printer** steps on **page 29**.

At the printer

1. Press ▼ until √ `Held jobs` appears, and then press ✓.
2. Press ▼ until the √ appears next to your user name, and then press ✓.
3. Press ▼ until the √ appears next to the type of action you want to perform:

Print All Jobs	**Delete All Jobs**
Print A Job	**Delete A Job**
Print Copies	

4. Press ✓.
5. Press ▼ until the √ appears next to the job you want, and then press ✓.

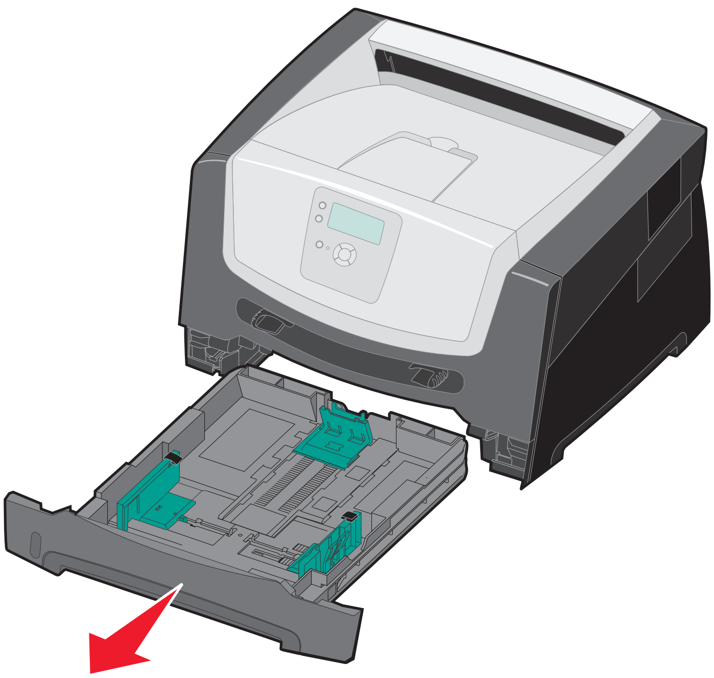
   The job will print or be deleted according to the type of print job and action you selected.

4 Installing options

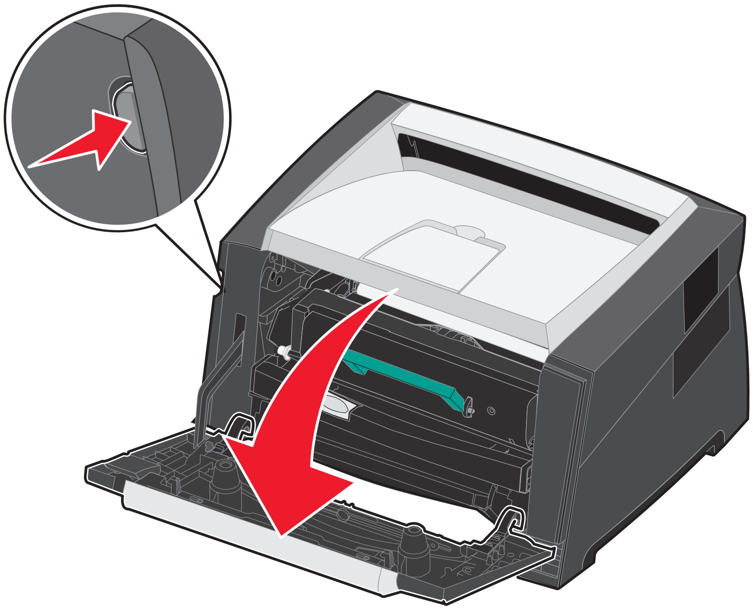
Accessing the system board

CAUTION: To install memory, you must access the printer system board. Turn the printer off, and unplug the power cord from the wall outlet before continuing.

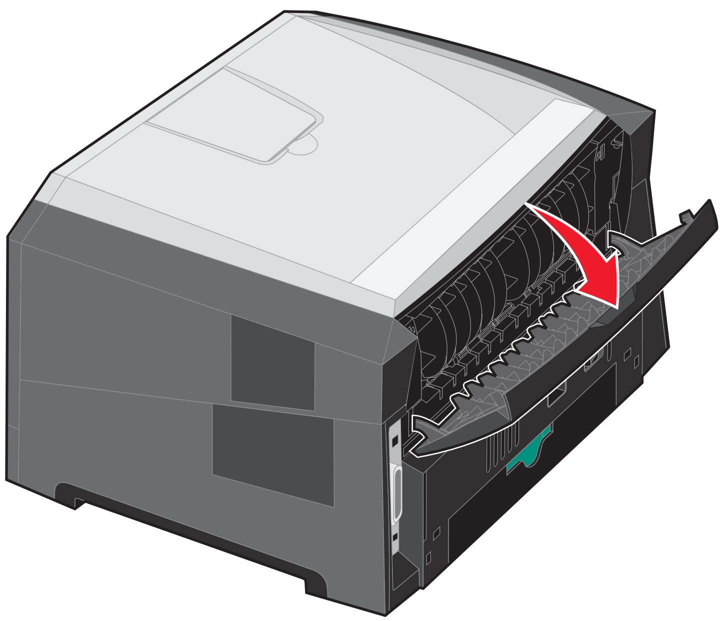
1 Remove the paper tray.



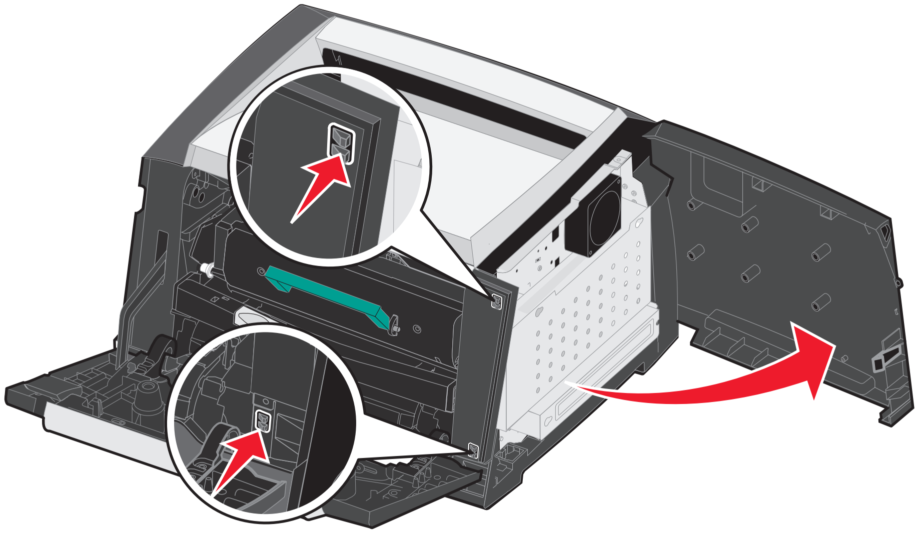
2 Press button on the left side of the printer to release and lower the front door.



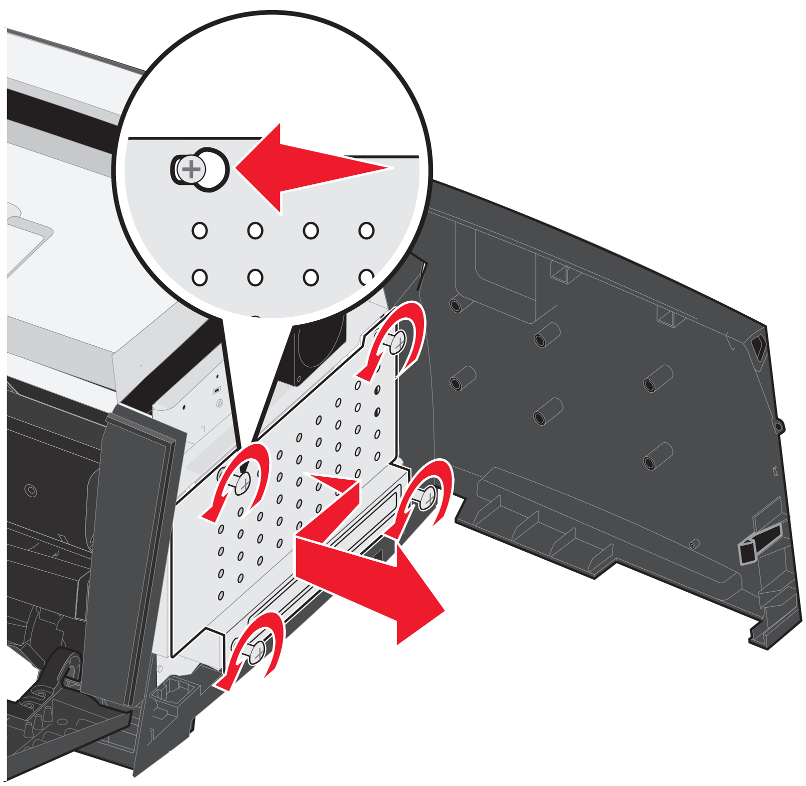
3 Open the rear exit.



4 Press both buttons on the front right side of the machine to release the side access door.



5 Loosen the four screws of the cover to gain access to the system board.



Adding a memory card

The system board has one connector for an optional memory card.

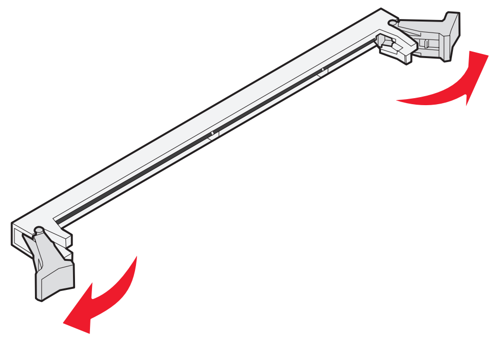
CAUTION: If you are installing a memory card after setting up the printer, turn the printer off, and unplug the power cord from the wall outlet before continuing.

Note: Memory options designed for other Lexmark printers may not work with your printer.

1. Access the system board (see **Accessing the system board on page 30**).
2. Push open the latches on both ends of the memory connector.
3. Unpack the memory card.

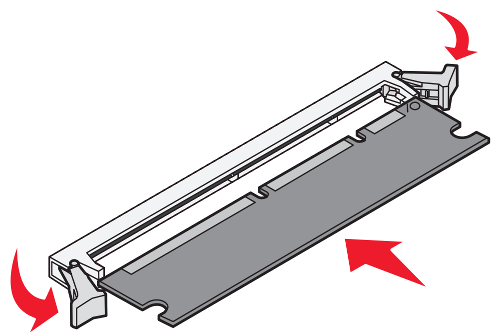
   Warning: Memory is easily damaged by static electricity. Touch something metal, such as the printer frame, before you touch a memory card.

   Avoid touching the connection points along the edge of the card.



4. Align the notches on the bottom of the card with the notches on the connector.
5. Push the memory card firmly into the connector until the latches on either end of the connector *snap* into place.

   It may require some force to fully seat the card.
6. Make sure each latch fits over the notch on each end of the card.
7. Close the side access door.
8. Close the rear exit.
9. Close the front door.



Adding a flash memory card

The system board has two connectors for an optional flash memory card.

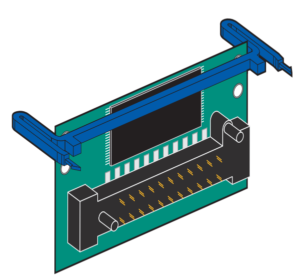
CAUTION: If you are installing a flash memory card after setting up the printer, turn the printer off, and unplug the power cord from the wall outlet before continuing.

Note: Flash memory card options designed for other Lexmark printers may not work with your printer.

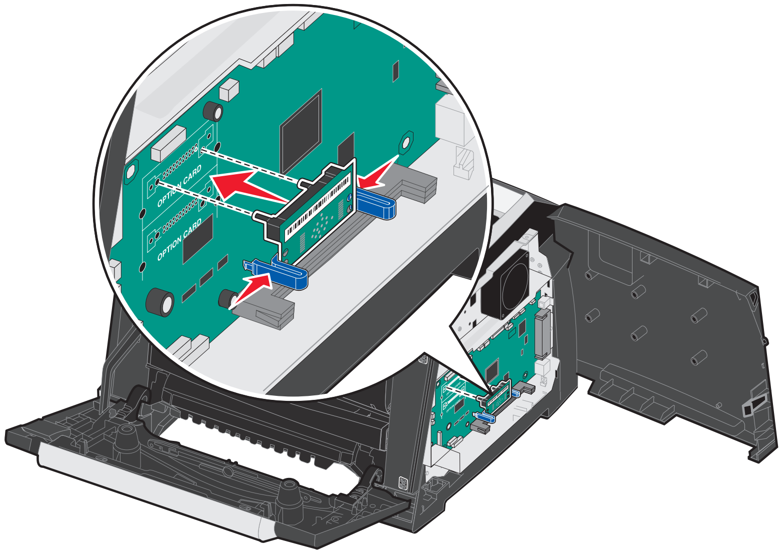
1. Access the system board (see **Accessing the system board on page 30**).
2. Unpack the flash memory card.

   Warning: Flash memory is easily damaged by static electricity. Touch something metal, such as the printer frame, before you touch a flash memory card.

   Avoid touching the connection points along the edge of the card.



3 Squeeze the retainers, and align the plastic pins on the flash memory card with the holes on the system board.



4 Push the flash memory card firmly into the holes of the system board until it *snaps* into place.

Note: The flash card can be installed in the top or the bottom set of connector pin holes.

5 Close the side access door.

6 Close the rear exit door.

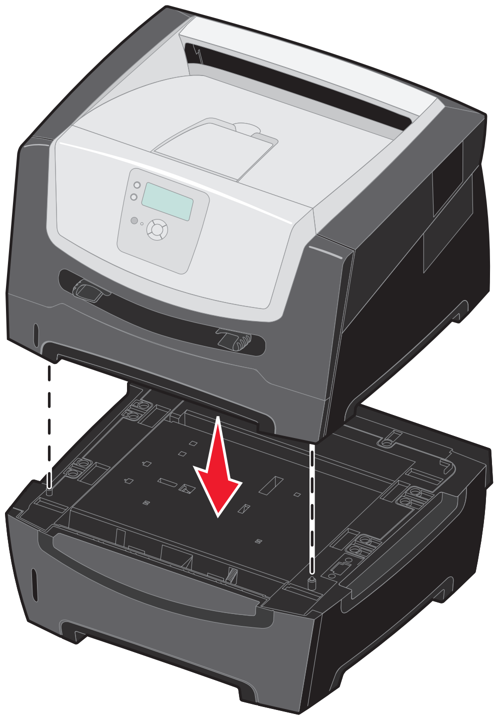
7 Close the front door.

8 Plug the power cord into the wall outlet and turn the printer on to continue print functions.

Installing an optional 550-sheet drawer

CAUTION: Turn the printer off, and unplug the power cord from the wall outlet before continuing.

Place the printer unit directly on top of the 550-sheet drawer.



Recognizing installed options

The printer driver should automatically recognize the newly-installed option when the printer is turned on. If it does not, you can add the appropriate option manually.

1. Click **Start** → **Settings** → **Printers**.
2. Select the printer icon.
3. Click **File** → **Properties**.
4. Click the **Install Options** tab.
5. Add the appropriate options to your configuration:

    Memory Card—Increase the printer memory to the appropriate number.

    550-sheet drawer

6. Click **OK**.

5 Maintaining the printer

Periodically, you need to complete certain tasks to maintain optimum print quality. These tasks are covered in this chapter.

If several people are using the printer, you may want to designate a key operator to do the setup and maintenance of your printer. Refer printing problems and maintenance tasks to this key operator.

In the U.S., contact Lexmark at 1-800-539-6275 for information about Lexmark Authorized Supplies Dealers in your area. In other countries or regions, visit the Lexmark Web site at **www.lexmark.com,** or contact the place where you bought your printer.

Storing supplies

Choose a cool, clean storage area for your printer supplies. Store supplies right side up in their original packaging until you are ready to use them.

Do not expose supplies to:

- Direct sunlight
- Temperatures above 35°C (95°F)
- High humidity (above 80%)
- Salty air
- Corrosive gases
- Heavy dust

Determining the status of supplies

The printer control panel alerts you once a supply item or maintenance is required. You can also view the status of supplies in your printer on the control panel unless the printer is printing or in a busy state. The header or gray area at the top of the display will indicate the printer is **`Ready`** and lets you know if any trays are low. Selecting **`Status / Supplies`** on the display will open the **`Status / Supplies`** screen where you can view the status of the various trays and open the supplies screen to view the current status of your toner cartridge.

Photoconductor kit end-of-life

To ensure print quality and to avoid damage to the printer, the printer stops operating after the photoconductor kit has reached a maximum of 110% of its life. The message **`84 Replace Photoconductor`** is displayed when the printer reaches this point. If the Toner Alarm setting is set to Single or Continuous (default is Off), the printer automatically notifies you before the photoconductor kit reaches this point and displays the message **`84 Photoconductor Life Warning`**. To avoid having the printer stop operating, replace the photoconductor kit when you first receive the **`84 Photoconductor Life Warning`** message. While the printer may continue to function properly after the photoconductor kit has reached its official end-of-life (approximately 30,000 pages), print quality begins to significantly decrease until the photoconductor stops operating at the maximum of 110% of its life. Once the photoconductor kit has been replaced, and the counter has been reset, normal printer operation resumes. For more information, see the instruction sheet that came with your photoconductor kit.

Conserving supplies

Several settings in your application software or on the display let you conserve toner and paper. For more information on changing these settings, see the *Menus and Messages Guide*.

Supply	Menu selection item	What the setting does
Toner	Toner Darkness in the Defaults → Quality Menu	Lets you adjust the level of toner released on a sheet of print media. The values range from 1 (lightest setting) to 10 (darkest setting).
Print media	Multipage Print in the Defaults → Finishing Menu	Causes the printer to print the two or more page images on one side of a sheet. Values for Multipage Print are 2 Up, 3 Up, 4 Up, 6 Up, 9 Up, 12 Up, and 16 Up. Combined with the duplex setting, Multipage Print lets you print up to 32 pages on one sheet of paper (16 images on the front and 16 on the back).
	Duplex in the Defaults → Finishing Menu	Duplex printing lets you print on both sides of a sheet of paper.
	Use your software application or printer driver to send a Verify Print job.	Lets you examine the first copy of a multiple-copy job to be sure it is satisfactory before you print the other copies. If the job is unsatisfactory, you can cancel the job. See **Printing and deleting held jobs on page 28** for more information about a Verify Print job.

Ordering supplies

To order supplies in the U.S., contact Lexmark at 1-800-539-6275 for information about Lexmark Authorized Supplies Dealers in your area. In other countries or regions, visit the Lexmark Web site at **www.lexmark.com,** or contact the place where you bought your printer.

Ordering a toner cartridge

Part number	Description	Average cartridge yield
World Wide		
E250X22G	Photoconductor kit	Up to 30,000 standard pages[1]
For the USA and Canada[3]		
E450A21A	Toner Cartridge	6,000 standard pages[2]
E450H21A	High Yield Toner Cartridge	11,000 standard pages[2]
E450A11A	Return Program Toner Cartridge	6,000 standard pages[2]
E450H11A	High Yield Return Program Toner Cartridge	11,000 standard pages[2]
For Europe, the Middle East, and Africa[4]		
E450A21E	Toner Cartridge	6,000 standard pages[2]
E450H21E	High Yield Toner Cartridge	11,000 standard pages[2]
E450A11E	Return Program Toner Cartridge	6,000 standard pages[2]
E450H11E	High Yield Return Program Toner Cartridge	11,000 standard pages[2]
For the Asia Pacific Region[5]		
E450A21P	Toner Cartridge	6,000 standard pages[2]
E450H21P	High Yield Toner Cartridge	11,000 standard pages[2]
E450A11P	Return Program Toner Cartridge	6,000 standard pages[2]
E450H11P	High Yield Return Program Toner Cartridge	11,000 standard pages[2]
For Latin America[6]		
E450A21L	Toner Cartridge	6,000 standard pages[2]
E450H21L	High Yield Toner Cartridge	11,000 standard pages[2]
E450A11L	Return Program Toner Cartridge	6,000 standard pages[2]
E450H11L	High Yield Return Program Toner Cartridge	11,000 standard pages[2]

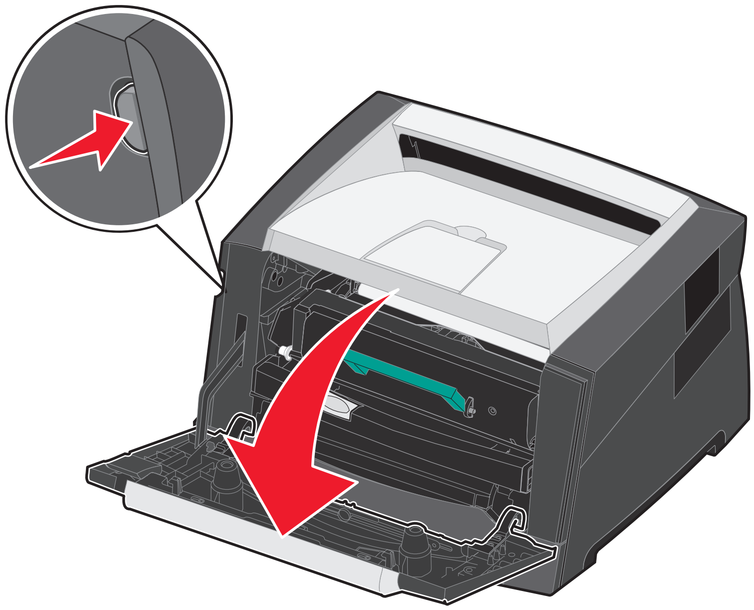
[1] Approximately 5% coverage.
[2] Declared yield value in accordance with ISO/IEC 19752.
[3] Designed for use only in the USA and Canada.
[4] Designed for use only in Europe, Middle East, and Africa.
[5] Designed for use only in Asia Pacific Region, Australia, and New Zealand.
[6] Designed for use only in Latin America.

When the **`88 Toner Low`** message appears, you should order a new toner cartridge. You can print a few hundred pages after the **`88 Toner Low`** message appears. You need to have a new cartridge available when the current one no longer prints satisfactorily.

Changing a toner cartridge

1 Turn the printer off.

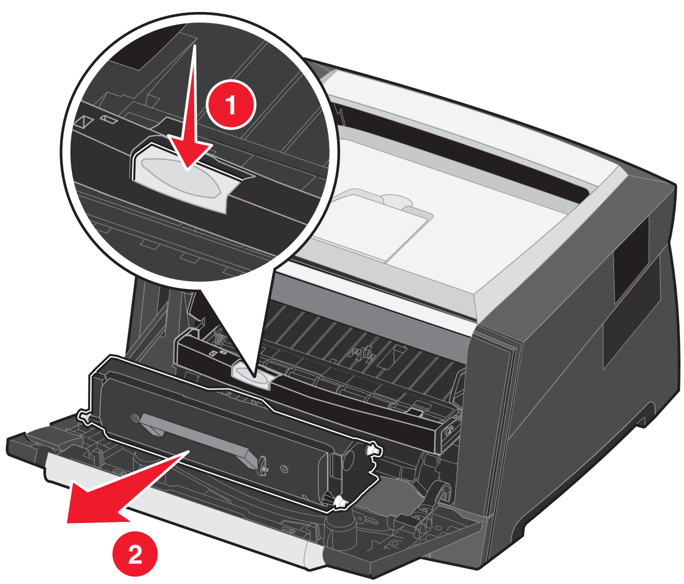
2 Press the button on the left side of the printer to release and lower the front door.



3 Remove the toner cartridge.

a Press the release button on the base of the print cartridge assembly.

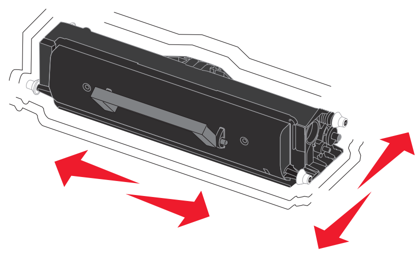
b Grasp the handle, pulling up and out to remove the toner cartridge.



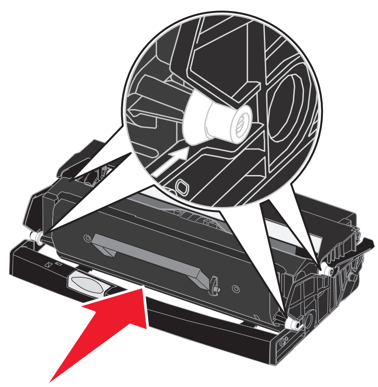
4 Unpack the new toner cartridge.

Note: You can use the packing material from the new toner cartridge to ship the old toner cartridge back to Lexmark for recycling. For more information, see **Recycling Lexmark products on page 44**.

5 Firmly shake the toner cartridge in all directions to distribute the toner.



6 Install the new toner cartridge by aligning the white rollers on the toner cartridge with the white arrows on the tracks of the photoconductor and pushing the toner cartridge in as far as it will go. The toner cartridge *clicks* into place when correctly installed.



7 Close the front door.

8 Turn the printer back on.

Ordering a photoconductor kit

When the **`84 PC Life Warning`** message appears, you should order a new photoconductor kit. You can print a few hundred pages after the **`84 PC Life Warning`** message appears.

Changing a photoconductor kit

Warning: When replacing a photoconductor kit, do not leave the new photoconductor kit exposed to direct light for an extended period of time. Extended light exposure can cause print quality problems.

1 Turn the printer offc

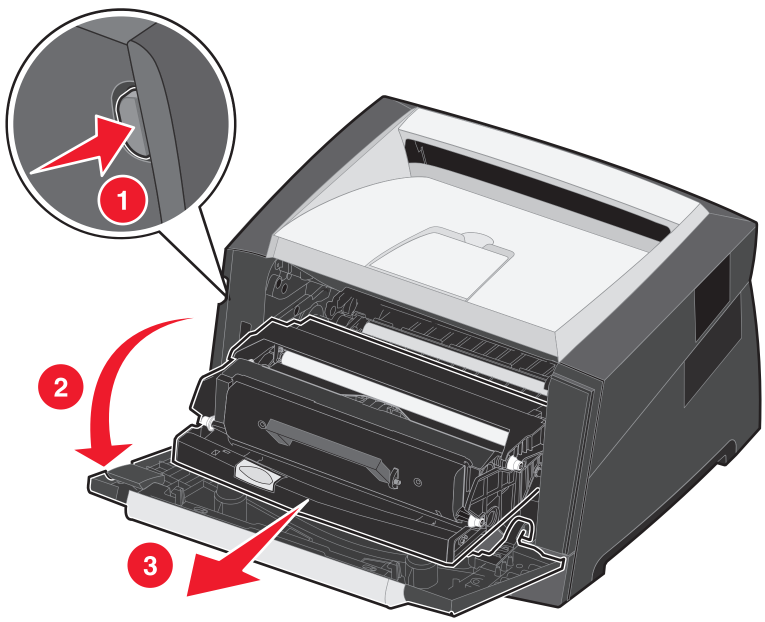
2 Remove the print cartridge assembly.

a Press the button on the left side of the printer to release the front door.

b Lower the front door.

c Grasp the toner cartridge handle, and pull up and out.

Note: Do not press the button on the print cartridge assembly

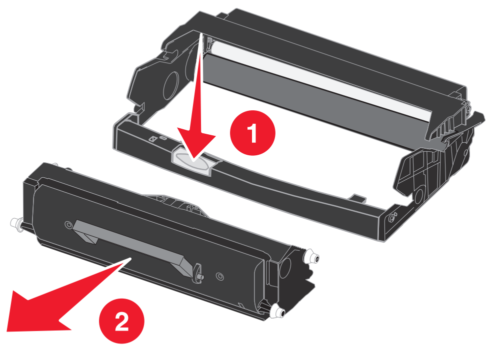


Place the print cartridge assembly on a flat, clean surface.

3 Remove the toner cartridge:

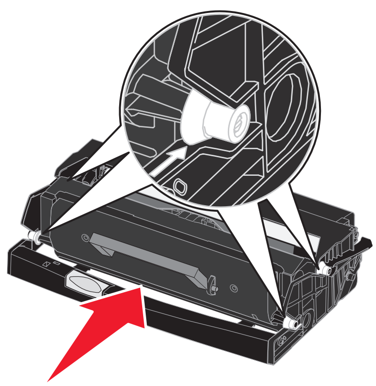
a Press the button on the base of the print cartridge assembly.

b Grasp the toner cartridge handle, and pull up and out.

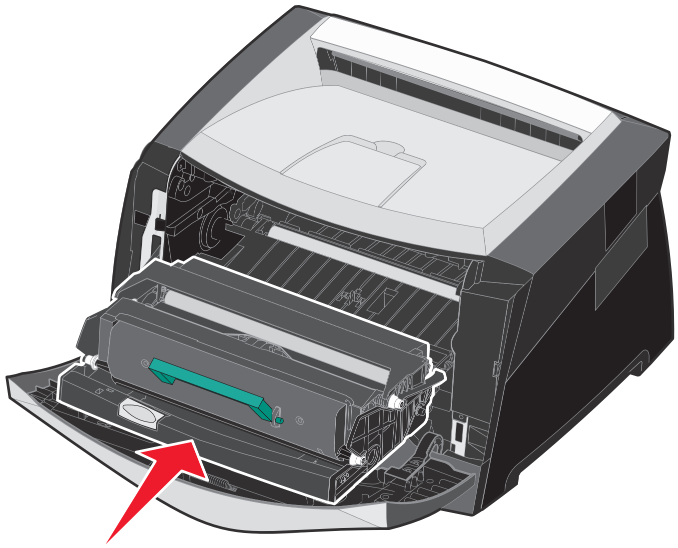


4 Unpack the new photoconductor kit.

5 Install the toner cartridge into the new print cartridge assembly by aligning the white rollers on the toner cartridge with the white arrows on the tracks of the photoconductor and pushing the toner cartridge in as far as it will go. The cartridge *clicks* into place when correctly installed.



6 Install the print cartridge assembly into the printer by aligning the green arrows on the guides of the print cartridge assembly with the green arrows on the tracks in the printer and pushing the print cartridge assembly in as far as it will go.



7 Close the front door.

8 Turn the printer back on.

9 Reset the photoconductor counter (see the instruction sheet that shipped with the new photoconductor kit).

Note: Print your printer menu settings pages. For more information, see **Printing the menu settings page on page 27**. If Photoconductor is listed under **Warnings**, the photoconductor counter has not been properly reset.

Maintenance kit

`80 Scheduled Maintenance` appears on the display after 120,000 pages have printed to let you know it is time to replace printer maintenance items. Order a maintenance kit when `80 Scheduled Maintenance` first appears on the display. The maintenance kit contains all the items necessary to replace the pick rollers, the fuser, and the transfer roller.

Note: The maintenance kit may not be available in all geographies.

See the following table for the maintenance kit part number for your specific printer.

Machine voltage	Part numbers
110 V	40X2847
220 V	40X2848
100 V	40X2849

Recycling Lexmark products

To return Lexmark products to Lexmark for recycling:

1 Visit our Web site:

www.lexmark.com/recycle

Follow the instructions on the computer screen.

6 Clearing jams

By carefully selecting print media and loading it properly, you should be able to avoid most paper jams. For more information on avoiding paper jams, see **Avoiding jams on page 18**. If jams do occur, follow the steps outlined in this section.

To resolve the paper jam messages, you must clear the entire paper path, and then press to clear the message and resume printing. The printer prints a new copy of the page that jammed if Jam Recovery is set to On or Auto; however, the Auto setting does not guarantee the page will print.

Identifying jams

When the printer jams, the appropriate jam message appears on the printer control panel.

Understanding jam messages

The following table lists the jam messages that can occur and the action necessary to clear the message. The jam message indicates the area where the jam occurred. However, it is best to clear the entire paper path to ensure you have cleared all possible jams.

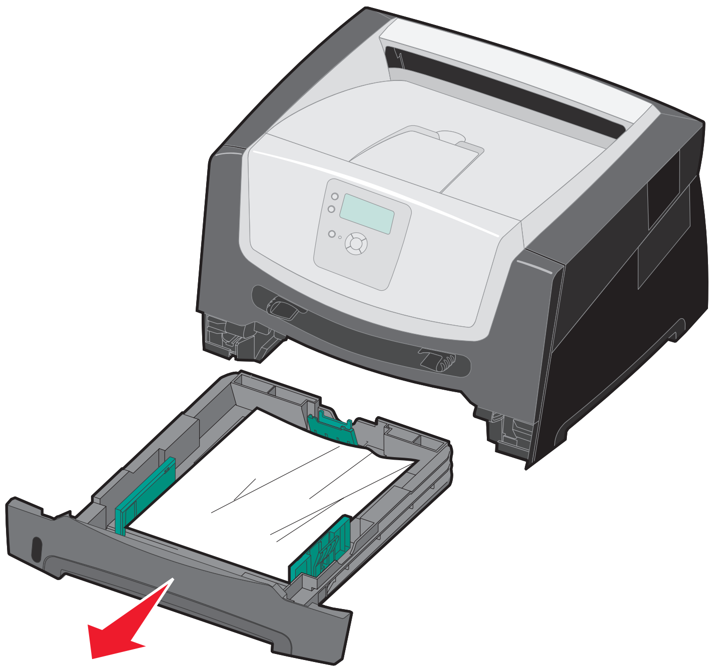
Message	What to do
200 Paper Jam - Remove Cartridge	Open the front door, remove the toner cartridge, and remove the jammed print media.
201 Paper Jam - Remove Cartridge	Open the front door, remove the toner cartridge, and remove the jammed print media.
202 Paper Jam - Open Rear Door	Open the rear printer exit, and remove the jammed print media.
231 Paper Jam - Open Rear Door	Open the rear printer exit, and remove the jammed print media.
233 Paper Jam - Remove Tray	Remove the paper tray, push down the green lever, and remove the jammed print media.
234 Paper Jam - Check Duplex	Remove the paper tray, push down the green lever, and remove the jammed media. If no jammed media is present, open the rear paper exit, and remove the jammed print media.
235 Paper Jam - Open Rear Door	Open the rear printer exit, and remove the jammed print media.
241, 242 Paper Jam - Check tray <x>	Open tray <x> to remove the jammed print media.
251 Paper Jam - Check Man Feeder	Remove jammed print media from the manual feeder.

Clearing printer jams

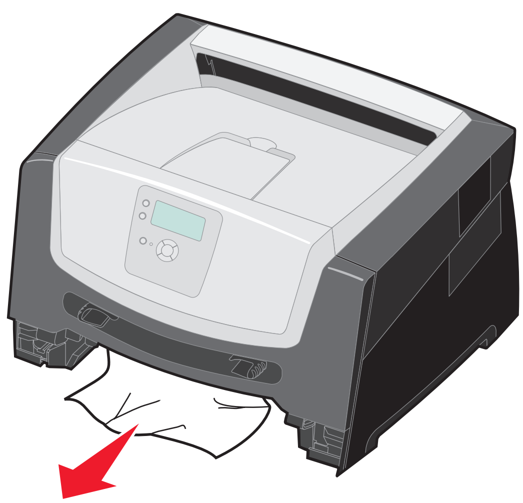
Clearing a jam

We recommend clearing the entire paper path when a paper jam occurs. To clear the jam:

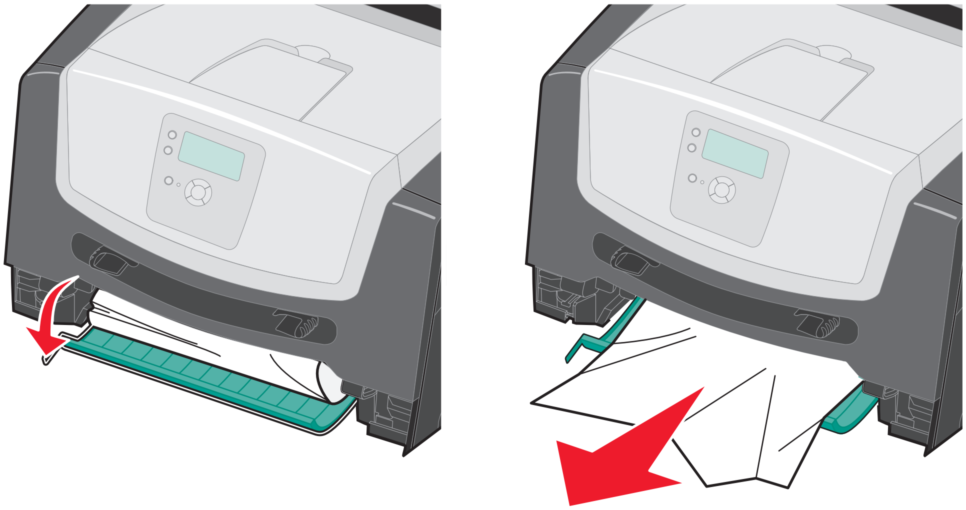
1 Open the paper tray. If necessary, remove the tray from the printer.



2 Remove the jammed media.



3 Press down on the green duplex flap to release jammed pages from the duplex area.

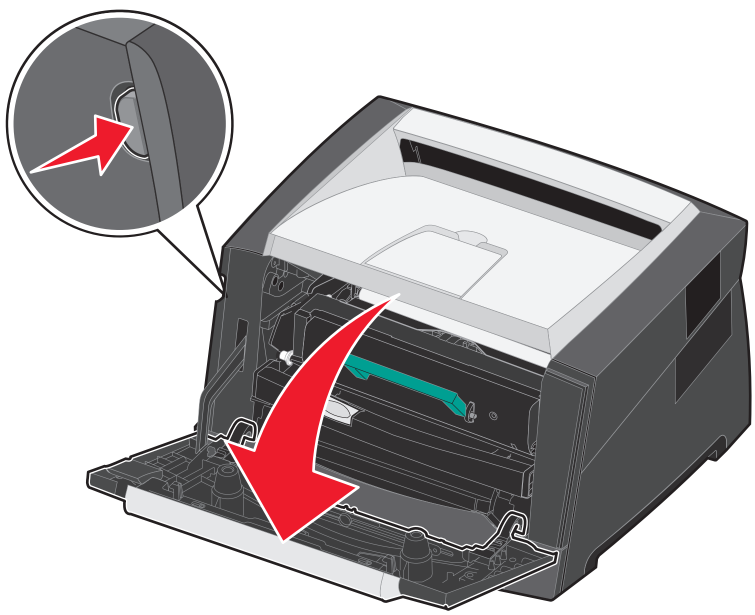


4 Remove any crumpled paper from the tray.

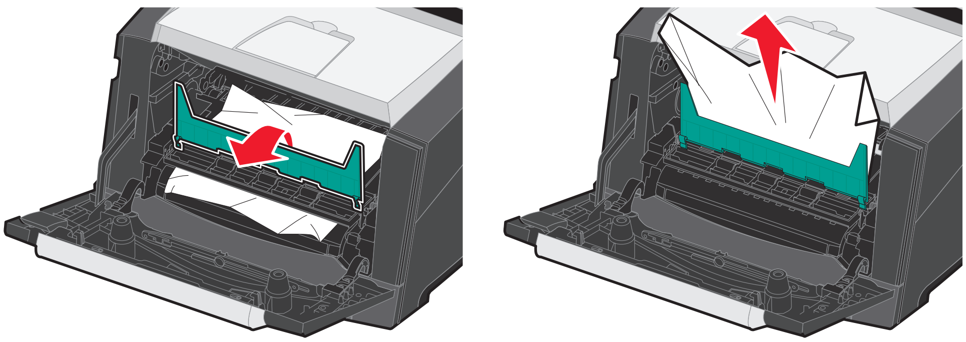


CAUTION: Fuser or fuser area may be hot.

5 Open the front door, and remove the print cartridge assembly.

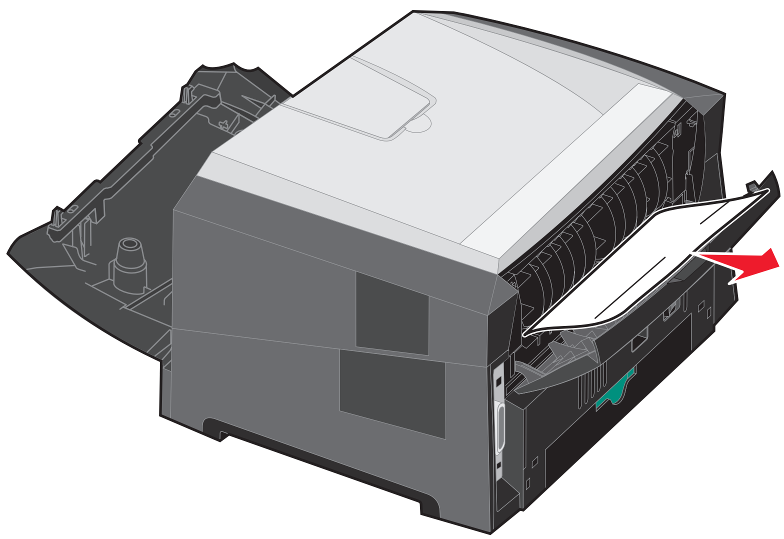


6 Lift the flap at the front of the printer, and remove the jammed pages beneath the flap.



CAUTION: Fuser or fuser area may be hot.

7 Open the rear exit, and remove the jammed pages.



8 After you have cleared the jams, reinstall the print cartridge assembly, and make sure all printer doors and trays are closed.

9 Press ✓.

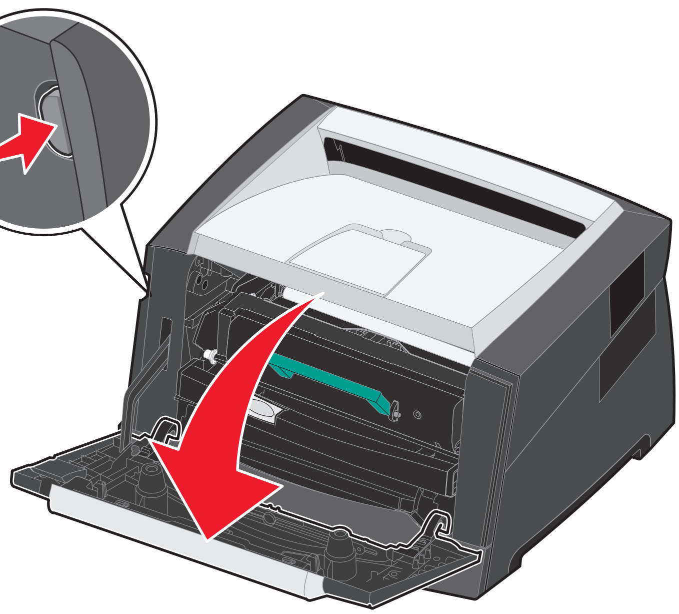
Note: Jam recovery is set to Auto by default. When jam recovery is set to Auto, the memory that holds the image of a page may be reused after the page is printed but before it has successfully exited the printer if that memory is needed for another use. Therefore, a jammed page may or may not be reprinted, depending on the overall memory usage in the printer.

Clearing a jam in the manual feeder

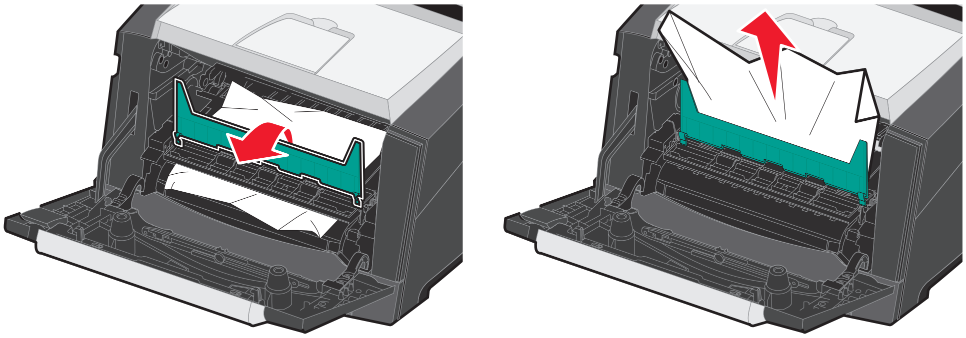
1 Remove the paper from the manual feeder.



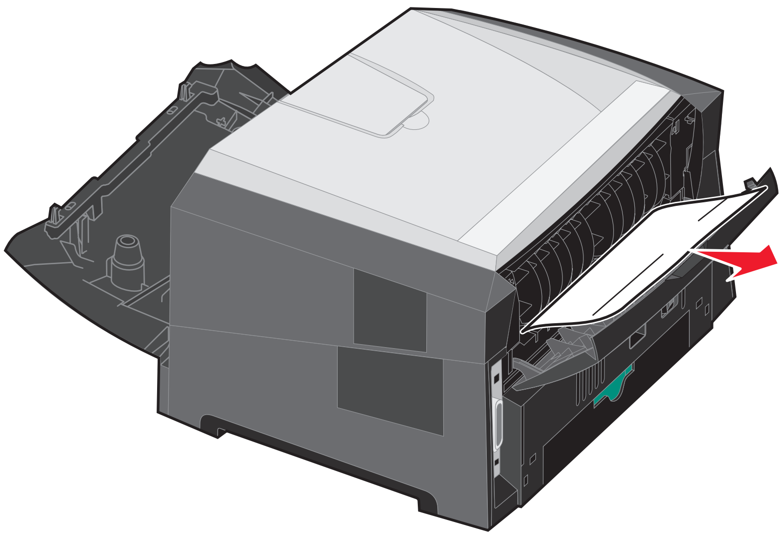
2 Open the front door, and remove the print cartridge assembly.



3 Lift the flap at the front of the printer, and remove the jammed pages beneath the flap.



4 Open the rear exit, and remove the jammed pages.



CAUTION: Fuser or fuser area may be hot.

5 After you have cleared the jams, reinstall the print cartridge assembly, and make sure all printer doors and trays are closed.

6 Press ✓.

Note: Jam recovery is set to Auto by default. When jam recovery is set to Auto, the memory that holds the image of a page may be re-used after the page is printed but before it has successfully exited the printer if that memory is needed for another use. Therefore, a jammed page may or may not be reprinted, depending on the overall memory usage in the printer.

7 Load one sheet of the print media.

8 Slide the side guide toward the inside of the tray until it lightly rests against the edge of the media.

9 Press ✓.

7 Troubleshooting

Online customer support

Customer support is available on our Lexmark Web site at **www.lexmark.com**.

Calling for service

When you call for printer service, describe the problem you are experiencing, the message on the display, and the troubleshooting steps you have already taken to find a solution.

You need to know your printer model type and serial number. See the label on the printer for this information.

The serial number is also listed on the menu settings page. See **Printing the menu settings page on page 27** for more information.

For service in the U.S. or Canada, call 1-800-Lexmark (1-800-539-6275). See our Lexmark Web site at **www.lexmark.com** for the numbers for other countries/regions.

Note: When calling for service, call from the location of the printer.

Checking an unresponsive printer

If your printer is not responding, first make sure:

- The power cord is plugged into the printer and a properly grounded electrical outlet.
- The electrical outlet is not turned off by any switch or breaker.
- The printer is not plugged into any surge protectors, uninterrupted power supplies, or extension cords.
- Other electrical equipment plugged into the outlet is working.
- The printer is turned on.
- The printer cable is securely attached to the printer and the host computer, print server, option, or other network device.

Once you have checked each of these possibilities, turn the printer off and back on.

Printing multiple-language PDFs

Symptom	Cause	Solution
Some documents do not print.	The documents contain unavailable fonts.	**1** Open the document you want to print in Adobe Reader. **2** Click the printer icon. The Print dialog appears. **3** Check the **Print as image** box. **4** Click **OK**.

Solving printing problems

Symptom	Cause	Solution
The control panel display is blank or displays only diamonds.	The printer self test failed.	Turn the printer off, wait about 10 seconds, and turn the printer back on. If the `Performing Self Test` and `Ready` messages do not appear, turn the printer off and call for service.
Jobs do not print.	The printer is not ready to receive data.	Make sure `Ready` or `Power Saver` appears on the display before sending a job to print. Press ✓ to return the printer to the `Ready` state.
	The output bin is full.	Remove the stack of paper from the output bin, and then press ✓.
	The specified tray is empty.	Load paper in the tray.
	You are using the wrong printer driver or are printing to a file.	• Verify you are using the printer driver associated with your printer. • If you are using a USB Direct interface, make sure you are running Windows 2000, Windows XP or Windows Server 2003 and using a printer driver compatible with Windows 2000, Windows XP or Windows Server 2003.
	Your internal print server is not set up properly or is not connected properly.	Verify that you have properly configured the printer for network printing. See the drivers CD or the Lexmark Web site for information.
	You are using the wrong interface cable, or the cable is not securely connected.	Make sure you are using a recommended interface cable. Make sure the connection is secure.
Held jobs do not print.	A formatting error has occurred.	• Print the job. (Only part of the job may print.) • Delete the job. • Free up additional printer memory by scrolling through the list of held jobs and deleting others you have sent to the printer.
	The printer has insufficient memory.	
	The printer has received invalid data.	Delete the job.

Symptom	Cause	Solution
Job takes longer than expected to print.	The job is too complex.	Reduce the complexity of your print job by eliminating the number and size of fonts, the number and complexity of images, and the number of pages in the job.
	Page Protect is set to On.	Set **Page Protect** to Off from the **Setup Menu**. For more information, see the *Menus and Messages Guide*.
	The printer Operating Mode is set to Quiet mode or Eco-mode.	Set the **Operating Mode** to **Normal**. For more information, see **Selecting printer operating mode on page 63**.
Job prints from the wrong tray or on the wrong paper or specialty media.	The control panel menu settings do not match the media loaded in the tray.	Make sure the Paper Size and Paper Type specified in the printer driver match the paper size and type in the tray.
Incorrect characters print.	You are using an incompatible parallel cable.	If you are using a parallel interface, make sure you are using an IEEE 1284-compliant parallel cable. We recommend Lexmark part number 1021231 for the standard parallel port.
	The printer is in Hex Trace mode.	If `Ready Hex` appears on the display, you must exit Hex Trace mode before you can print your job. Turn the printer off and back on to exit Hex Trace mode.
Large jobs do not collate.	Collate is not set to On.	Set **Collation** to `On` in the **Finishing Menu** or through the printer driver. **Note:** Setting **Collation** to `Off` in the driver overrides the setting in the **Finishing Menu**. For more information, see the *Menus and Messages Guide*.
	The job is too complex.	Reduce the complexity of the print job by eliminating the number and size of fonts, the number and complexity of images, and the number of pages in the job.
	The printer does not have enough memory.	Add printer memory.
Unexpected page breaks occur.	The job has timed out.	Set **Print Timeout** to a higher value from the **Setup Menu**. For more information, see the *Menus and Messages Guide*.
The paper is curled once it exits the printer.	The print media has been in the printer too long or is too heavy. The print job has too many pages for simplex printing. The paper has absorbed moisture due to high humidity.	• Use paper that is sealed in its original packaging. • Turn the paper over. • Rotate the paper 180 degrees. • If you are printing a multiple-page job, try duplexing it. • When printing on heavy print media, open the rear exit door for a straight-through path. • Try another type or brand of print media, such as a xerographic paper for laser printers. • If possible, try printing in a less humid environment. If the paper still curls, select the Reduced Curl setting from the Configuration menu (for more information, see **Turning on Reduced Curl mode**).

Turning on Reduced Curl mode

If the print media is curled once it exits the printer, Reduced Curl mode can be turned on to help reduce the problem. However, before turning this mode on, you should try the possible solutions offered in Troubleshooting. For more information, see **The paper is curled once it exits the printer.**

Note: Print speed is significantly slower in Reduced Curl mode.

1 Turn the printer off.

Note: Disabling the control panel menus does not prevent access to Print and Hold functionality.

2 Press and hold ✓ and ▶ while turning the printer on.
3 Release both buttons when the memory information appears on the display.
The printer performs its power-on sequence, and then `Config Menu` appears on the first line of the display.
4 Press ▼ until √ `Reduced Curl` appears, and then press ✓.
5 Press ▼ until √ `On` appears, and then press ✓.
`Submitting Selection` appears briefly. The control panel returns to `Reduced Curl`.
6 Press ▼ until √ `Exit Config Menus` appears, and then press ✓.
7 `Resetting the Printer` appears briefly followed by a clock. The control panel then returns to `Ready`.

The printer returns to the Ready state.

Solving option problems

If an option does not operate correctly after it is installed or if it quits working:

- Turn the printer off, wait for about 10 seconds, and turn the printer on. If this does not fix the problem, unplug the printer from the wall outlet, and check the connection between the option and printer.
- Print the menu settings page, and check to see if the option is listed in the Installed Options list. If the option is not listed, reinstall it. See **Printing the menu settings page on page 27** for more information.
- Make sure the option is selected in the software application you are using.

  For Macintosh computer users: Make sure the printer is set up in Chooser.

The following table lists printer options and suggested corrective actions for related problems. If the suggested corrective action does not fix the problem, call your service representative.

Option	Action
Drawers	• Make sure the connection between drawers and the printer is secure. • Make sure the print media is loaded correctly.
Printer memory	Make sure printer memory is securely connected to the printer system board.

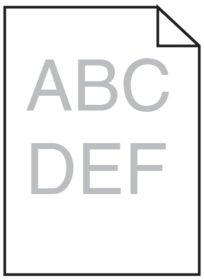
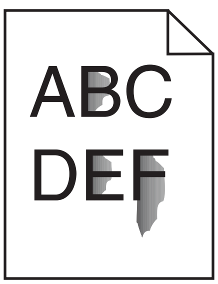
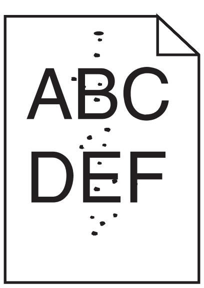
Problem	Solution
Service messages	A service message indicates printer failure that may require service. Turn the printer off, wait about 10 seconds, and then turn the printer on. If the error recurs, write down the error number, the problem, and a detailed description. Call for service.

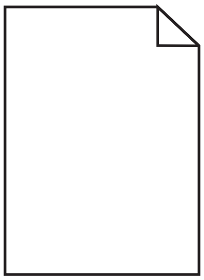
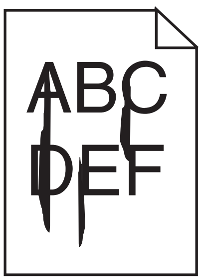
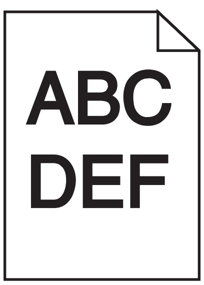
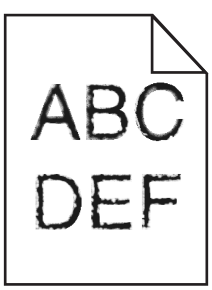
Solving paper feed problems

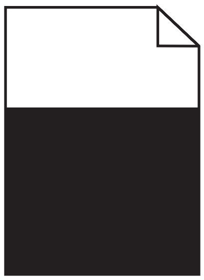
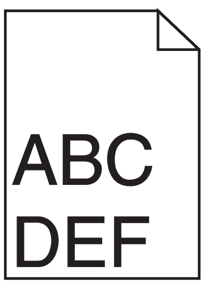
Symptom	Cause	Solution
Paper frequently jams.	You are using paper that does not meet the printer specifications.	Try the following: • Flex the paper. • Turn the print media over. Check the following: • Drawer is properly installed. • Print media is loaded correctly. • Print media is not damaged. • Print media meets specifications. • Guides are positioned correctly for the print media size selected. Use recommended paper and other specialty media. See the *Card Stock & Label Guide* available on our Lexmark Web site at **www.lexmark.com** for detailed specifications. For more information that can help prevent jams from occurring, see **Avoiding jams on page 18.**
	You have loaded too much paper or too many envelopes.	Make sure the print media is below the paper fill indicator on the side guides.
	Guides in the selected tray are not set to the appropriate position for the size paper loaded.	Move the guides in the tray to the correct position.
	The paper has absorbed moisture due to high humidity.	Load paper from a fresh package. Store paper in its original wrapper until you load it. See **Storing print media on page 18** for more information.
The `Paper Jam` message remains after you remove the jammed paper.	You have not pressed ✓ or have not cleared the entire paper path.	Clear paper from the entire paper path, and then press ✓. For more informations, see **Clearing printer jams on page 46**.
The page that jammed does not reprint after you clear the jam.	Jam Recovery in the Setup menu is set to Off.	Set **Jam Recovery** to Auto or On. For more information, see the *Menus and Messages Guide*.
Blank pages feed into the output bin.	An incorrect media type is loaded in the tray being printed from.	Load the correct type media for your print job, or change the Paper Type to match the type of media loaded. For more information, see the *Menus and Messages Guide*.

Solving print quality problems

The information in the following table may help you solve print quality problems. If these suggestions still do not correct the problem, call for service. You may have a printer part that requires adjustment or replacement.

Problem	Action
Print is too light. 	• The toner may be low. • Change the **Toner Darkness** setting in the Quality menu. • Change the **Brightness** setting in the Quality menu. • Change the **Contrast** setting in the Quality menu. • If you are printing on an uneven print surface, change the Paper Weight and Paper Texture settings in the Paper menu. • Verify the correct print media is being used.
Toner smears, or print comes off the page. 	• If you are printing on an uneven print surface, change the Paper Weight and Paper Texture settings in the Paper menu. • Verify the print media is within the printer specifications. See **Understanding print media guidelines on page 12** for more details. If the problem continues, contact the Lexmark Customer Support Center at **http://support.lexmark.com**.
Toner appears on the back of the printed page.	Toner is on the transfer roll. To help prevent this, do not load print media that is smaller than the page size of the job to be printed. Open and close the printer top front cover to run the printer setup cycle.
Toner fog or background shading appears on the page. 	• Check the photoconductor kit to make sure it is installed correctly. • Replace the photoconductor kit.

Problem	Action
Entire page is white. 	• Make sure the packaging material is removed from the photoconductor kit. • Check the photoconductor kit and toner cartridge to be sure they are installed correctly. • Replace the photoconductor kit.
Streaks appear on the page. 	• If you are using preprinted forms, make sure the ink can withstand temperatures of 210°C (410°F). • Replace the photoconductor kit or toner cartridge.
Printing is too dark. 	• Change the **Toner Darkness** setting in the Quality menu. • Change the **Brightness** setting in the Quality menu. • Change the **Contrast** setting in the Quality menu. **Note:** Macintosh computer users should make sure the lines per inch (lpi) setting is not set too high in the software application.
Characters have jagged or uneven edges. 	• Change the **Print Resolution** setting in the Quality menu to 600 dpi, 1200 dpi, or 2400 Image Q. • Enable Enhance Fine Lines. • If you are using downloaded fonts, verify the fonts are supported by the printer, the host computer, and the software application.

Problem	Action
Part or all of the page is printed in black. 	Check the photoconductor kit to see if it is installed correctly.
The job prints, but the top and side margins are incorrect.  	• Make sure the **Paper Size** setting in the Paper menu is correct. • Make sure the margins are set correctly in your software application.
Ghost images appear.	• Make sure the **Paper Type** setting in the Paper menu is correct. • Replace the photoconductor kit.
Gray background prints.	• The **Toner Darkness** setting may be too dark. Change the **Toner Darkness** setting in the Quality menu. • Adjust the **Brightness** to a darker setting. • Adjust the **Contrast** to a darker setting. • The photoconductor kit may be defective. Replace the photoconductor kit.
Some of the print is cut off on the sides, top, or bottom of the media.	Move the guides in the tray to the proper positions for the size loaded.
Print is skewed or inappropriately slanted.	
Transparency print quality is poor.	• Use only transparencies recommended by the printer manufacturer. • Make sure the **Paper Type** setting in the Paper menu is set to Transparency.

The Quality menu control panel options can be adjusted to help improve print quality.

Menu selection	Purpose	Values	
Print Resolution	To select printed output resolution	600 dpi 1200 dpi 2400 Image Quality*	
Toner Darkness	Lightens or darkens printed output and conserves toner	1–10	**8*** is the default setting. Select a lower number to lighten the printed output or save toner.
Small Font Enhancer	Enhances the quality of small fonts	Off* Fonts Only Fonts/Images	

In addition, the Enhance Fine Lines and Gray Correction options can be enabled to improve print quality. These settings are available on the driver and on the printer Embedded Web Server (EWS) interface. For more information about these options, see the driver Help.

Driver option	Purpose	Values†	
Enhance Fine Lines	A selection to enable a print mode preferable for certain files containing fine line detail, such as architectural drawings, maps, electronic circuit diagrams, and flow charts	On	In the driver, enable the check box.
		Off*	In the driver, disable the check box.
Gray Correction	Automatically adjusts the contrast enhancement applied to images	Auto	In the driver, enable the check box.
		Off*	In the driver, disable the check box.
† Values marked by an asterisk (*) are the factory default settings.			

8 Administrative support

Adjusting control panel brightness and contrast

The LCD control panel contrast and brightness can be adjusted through the Utilities menu. For more information, see the *Menus and Messages Guide*.

The LCD Brightness and LCD Contrast settings are adjusted separately. To change the LCD Brightness or LCD Contrast settings:

1. Make sure your printer is on.
2. Press ⊶ on the control panel.
3. Press ▼ until √ **`Settings`** appears, and then press ✓.
4. Press ▼ until √ **`Utilities Menu`** appears, and then press ✓.
5. Press ▼ until √ appears next to the LCD setting you want to change, and then press ✓.
6. Press ▲ to increase the brightness or contrast, or press ▼ to decrease the brightness or contrast.
7. When the adjustment is complete, press ✓.

   This saves this setting as the new user default, and the printer returns to **`Ready`**.

Disabling control panel menus

Since many people could be using the printer, an administrator may choose to lock the control panel menus to keep others from changing menu settings from the control panel.

> **Note:** Disabling the control panel menus does not prevent access to Print and Hold functionality.

To disable the control panel menus so that changes cannot be made to the printer default settings:

1. Turn the printer off.
2. Press and hold ✓ and ▶ while turning the printer on.
3. Release both buttons when **`Performing Self Test`** appears on the display.

   The printer performs its power-on sequence, and then **`Config Menu`** appears on the first line of the display.
4. Press ▼ until √ **`Panel Menus`** appears, and then press ✓.
5. Press ▼ until √ **`Disable`** appears, and then press ✓.

   The following messages appear briefly: **`Submitting Selection`** and **`Disabling Menus.`** The control panel returns to **`Panel Menus`**.
6. Press ▼ until √ **`Exit Config Menus`** appears, and then press ✓.

   `Activating Menu Changes` appears. The menus are disabled.

   `Resetting the Printer` appears briefly followed by a clock. The control panel then returns to **`Ready`**.

Enabling control panel menus

1 Turn the printer off.
2 Press and hold ✓ and ▶ while turning the printer on.
3 Release both buttons when **Performing Self Test** appears on the display.

The printer performs its power-on sequence, and then **Config Menu** appears on the first line of the display.

4 Press ▼ until √ **Panel Menus** appears, and then press ✓.
5 Press ▼ until √ **Enable** appears, and then press ✓.

The following messages appear briefly in succession: **Submitting Selection** and **Enabling Menus.**

The control panel returns to **Panel Menus**.

6 Press ▼ until √ **Exit Config Menus** appears, and then press ✓.

Activating Menu Changes appears. The menus are enabled.

Resetting the Printer appears briefly followed by a clock. The control panel then returns to **Ready**.

Restoring factory default settings

When you first enter the printer menus from the control panel, you may notice an asterisk (*) to the left of a value in the menus. This asterisk indicates the *factory default setting*. These settings are the original printer settings. (Factory defaults may vary for different regions.)

When you select a new setting from the control panel, **Submitting Selection** appears. When the Submitting Selection message disappears, an asterisk appears next to the setting to identify it as the current *user default setting*. These settings are active until new ones are stored or the factory defaults are restored.

To restore the original printer factory default settings:

Warning: All downloaded resources (fonts, macros, and symbol sets) in printer memory (RAM) will be deleted. (Resources residing in flash memory or on the optional hard disk remain unaffected.)

1 Make sure the printer is on and **Ready** appears on the display.
2 Press the menu key on the control panel.
3 Press ▼ until √ **Settings** appears, and then press ✓.
4 Press ▼ until √ **Setup Menu** appears, and then press ✓.
5 Press ▼ until √ **Factory Defaults** appears, and then press ✓.
6 Press ▼ until √ **Restore Now** appears, and then press ✓.
7 The message **Restoring Factory Defaults** appears, followed by the **Ready** message.

When you select Restore:

- No other button actions are available on the control panel while **Restoring Factory Defaults** appears.
- All menu settings return to the factory default values, except:
  - The control panel Display Language setting in the Setup menu.
  - All settings in the Parallel menu, Network menu, and USB menu.

Adjusting Power Saver

To adjust the `Power Saver` setting:

1. Make sure the printer is on and `Ready` appears on the display.
2. Press (Menu) on the control panel.
3. Press ▼ until √ `Settings` appears, and then press (Select).
4. Press ▼ until √ `Setup Menu` appears, and then press (Select).
5. Press ▼ until √ `Power Saver` appears, and then press (Select).
6. Using the numeric pad or the right and left arrows on the control panel, enter the number of minutes for the printer to wait before entering Power Saver.

   The settings available range from 2–240 minutes. If you want to turn Power Saver off, see **Disabling Power Saver on page 62**.
7. Press (Select).

   `Submitting Selection` appears.

   Note: You can also adjust the Power Saver setting by issuing a Printer Job Language (PJL) command. For more information, see the *Technical Reference* available on our Lexmark Web site at **www.lexmark.com**.

Disabling Power Saver

Disabling Power Saver is a two step process. First, you must turn the variable on, and then select the variable. To disable Power Saver:

1. Turn the printer off.
2. Press and hold (Select) and ▶ while turning the printer on.
3. Release both buttons when `Performing Self Test` appears on the display.

   The printer performs its power-on sequence, and then `Config Menu` appears on the first line of the display.
4. Press ▼ until √ `Energy Conserve` appears, and then press (Select).
5. Press ▼ until √ `Off` appears, and then press (Select).

   `Submitting Selection` appears.

   The control panel returns to `Energy Conserve`.
6. Press ▼ until √ `Exit Config Menus` appears, and then press (Select).

   `Resetting the Printer` appears briefly followed by a clock. The control panel then returns to `Ready`.
7. Make sure `Ready` appears.
8. Press (Menu) on the control panel.
9. Press ▼ until √ `Settings` appears, and then press (Select).
10. Press ▼ until √ `Setup Menu` appears, and then press (Select).
11. Press ▼ until √ `Power Saver` appears, and then press (Select).
12. Use either the numeric keypad or the right and left arrows to enter **0** (zero). `Disabled` appears, and then press (Select).

    `Submitting Selection` appears. Power Saver is now disabled.

Selecting printer operating mode

You can select the printer operating mode that best suits your needs. For more information, see the *Menus and Messages* guide on the *Software and Documentation* CD

Note: Quiet Mode and Eco-Mode can be on at the same time.

Operating mode	Printer performance
Normal	The printer provides optimum performance.
Quiet Mode	The printer operates quietly by printing output at a slower speed.
Eco-Mode	The printer minimizes waste (toner, paper, energy) while maintaining acceptable print quality.

Setting security using the Embedded Web Server (EWS)

You can enhance the security of network communications and device configuration by using the advanced security options. These features are available through the Web page of the device.

Setting the system password

Setting the system password protects configuration of the Embedded Web Server. A system password is also required for Secure mode and confidential communication with MVP.

To set the system password:

1. Open your Web browser. In the address line, enter the IP address of the printer you want to configure using the format: *http: //ip_address/*.
2. Click **Configuration**.
3. Under Other Settings, click **Security**.
4. Click **Create Password**, if one has not been set previously. If a password has already been set, click **Change or Remove Password**.

Using the secure Embedded Web Server

The SSL (Secure Sockets Layer) allows for secure connections to the Web server within the print device. You can connect to the Embedded Web Server more securely by connecting to the SSL port instead of the default HTTP port. The SSL port connection will encrypt all Web server network communications between the PC and the printer. To connect to the SSL port:

Open your Web browser. In the address line, enter the IP address of the printer you want to configure using the format: *https: //ip_address/*.

Supporting SNMPv3 (Simple Network Management Protocol version 3)

SNMPv3 protocol allows for encrypted and authenticated network communications. It also lets the administrator select a desired level of security. Prior to use, at least one user name and password must be established from the settings page. To configure for SNMPv3 through the Embedded Web Server of the printer:

1. Open your Web browser. In the address line, enter the IP address of the printer you want to configure using the format: *http://ip_address/*.
2. Click **Configuration**.
3. Under Other Settings, click **Network/Ports**.
4. Click **SNMP**.

SNMPv3 authentication and encryption has three levels of support:

- No authentication and no encryption
- Authentication with no encryption
- Authentication and encryption

Note: Only the selected level and later may be used to communicate.

Locking the control panel menus

Control panel Menu Lockout lets you create a PIN number and choose specific menus to lock. Each time a locked menu is selected, the user will be prompted to enter the correct PIN at the control panel. The PIN does not affect any access through the EWS. To lock control panel menus:

1. Open your Web browser. In the address line, enter the IP address of the printer you want to configure using the format: *http://ip_address/*.
2. Click **Configuration**.
3. Under Other Settings, click **Security**.
4. Click **Menu Lockout Setup**.

Notices

Conventions

Note: A *note* identifies something that could help you.

Warning: A *warning* identifies something that could damage your product hardware or software.

CAUTION: A *caution* identifies something that could cause you harm.

Electronic emission notices

Federal Communications Commission (FCC) compliance information statement

The Lexmark E450dn, Machine Type 4512-630, has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The FCC Class B limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

The manufacturer is not responsible for any radio or television interference caused by using other than recommended cables or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate this equipment.

Note: To assure compliance with FCC regulations on electromagnetic interference for a Class B computing device, use a properly shielded and grounded cable such as Lexmark part number 1021294 for USB attach or 1021231 for parallel attach. Use of a substitute cable not properly shielded and grounded may result in a violation of FCC regulations.

Industry Canada compliance statement

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Standard ICES-003.

Avis de conformité aux normes de l’industrie du Canada

Cet appareil numérique de classe B est conforme aux exigences de la norme canadienne relative aux équipements pouvant causer des interférences NMB-003.

European Community (EC) directives conformity

This product is in conformity with the protection requirements of EC Council directives 89/336/EEC and 73/23/EEC on the approximation and harmonization of the laws of the Member States relating to electromagnetic compatibility and safety of electrical equipment designed for use within certain voltage limits.

A declaration of conformity with the requirements of the directives has been signed by the Director of Manufacturing and Technical Support, Lexmark International, S.A., Boigny, France.

This product satisfies the Class B limits of EN 55022 and safety requirements of EN 60950.

Japanese VCCI notice

製品にこのマークが表示されている場合、
次の要件を満たしています。

この装置は、情報処理装置等電波障害自主規制協議会(VCCI)の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
取扱説明書に従って正しい取り扱いをしてください。

Korean MIC statement

제품에 이 기호가 있는 경우 다음 문구가 적용됩니다.

B급 기기 (가정용 정보통신기기)

이 기기는 가정용으로 전자파적합등록을 한 기기로서
주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.

Hot surface notice

此符號表示該表面或元件會發熱。
請當心： 為避免被發熱表面或元件燙傷的危險，請先讓該表面或元件冷卻之後再觸摸。

Power regulation notice

Warning: Electrical surges can be very destructive to equipment connected to AC power sources.
If you plan to operate your printer at a voltage exceeding the voltage range(s) in the following table, you must attach a suitably rated and certified power-regulating device (such as a voltage stabilizer or UPS device) to the printer power supply. Your warranty may not cover damages caused by power surges

Normal voltage range	Maximum voltage range
100V–127V AC	90V–135V AC
220V–240V AC	198V–254V AC

Noise emission levels

The following measurements were made in accordance with ISO 7779 and reported in conformance with ISO 9296.

1-meter average sound pressure, dBA	
Printing	53
Idling	inaudible
Quiet Mode	49
Sleep / Power Saver Mode	inaudible

Product energy consumption

The following table documents the power consumption characteristics of the product.

Mode	Description	Power consumption
Printing	The product is generating hard-copy output from electronic inputs.	520 W
Ready	The product is ready to print.	12 W
Sleep / Power Saver	The product is in energy-saving mode.	10 W
Off	The product is powered off.	0 W

The power consumption levels listed in the previous table represent time-averaged measurements. Instantaneous power draws may be substantially higher than the average. Sleep/Power Saver mode can be modified from the printer control panel. The default timeout to Sleep/Power Saver mode is 30 minutes. For more information, see the *Menu's and Messages* guide on the *Software and Documentation* CD .

ENERGY STAR

Waste from Electrical and Electronic Equipment (WEEE) directive

The WEEE logo signifies specific recycling programs and procedures for electronic products in countries of the European Union. We encourage the recycling of our products. If you have further questions about recycling options, visit the Lexmark Web site at **www.lexmark.com** for your local sales office phone number.

Laser advisory label

A laser notice label may be affixed to this printer.

LUOKAN 1 LASERLAITE

VAROITUS! Laitteen käyttäminen muulla kuin tässä käyttoohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

KLASS 1 LASER APPARAT

VARNING! Om apparaten används på annat sätt än i denna bruksanvisning specificerats, kan avnändaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

Laser notice

The printer is certified in the U.S. to conform to the requirements of DHHS 21 CFR Subchapter J for Class I (1) laser products, and elsewhere is certified as a Class I laser product conforming to the requirements of IEC 60825-1.

Class I laser products are not considered to be hazardous. The printer contains internally a Class IIIb (3b) laser that is nominally a 5 milliwatt gallium arsenide laser operating in the wavelength region of 770-795 nanometers. The laser system and printer are designed so there is never any human access to laser radiation above a Class I level during normal operation, user maintenance, or prescribed service condition.

Statement of Limited Warranty for Lexmark E450dn

Lexmark International, Inc. Lexington, KY

This limited warranty applies to the United States and Canada. For customers outside the U.S., refer to the country-specific warranty information that came with your product.

This limited warranty applies to this product only if it was originally purchased for your use, and not for resale, from Lexmark or a Lexmark Remarketer, referred to in this statement as "Remarketer."

Limited warranty

Lexmark warrants that this product:

- Is manufactured from new parts, or new and serviceable used parts, which perform like new parts
- Is, during normal use, free from defects in material and workmanship

If this product does not function as warranted during the warranty period, contact a Remarketer or Lexmark for repair or replacement (at Lexmark's option).

If this product is a feature or option, this statement applies only when that feature or option is used with the product for which it was intended. To obtain warranty service, you may be required to present the feature or option with the product.

If you transfer this product to another user, warranty service under the terms of this statement is available to that user for the remainder of the warranty period. You should transfer proof of original purchase and this statement to that user.

Limited warranty service

The warranty period starts on the date of original purchase as shown on the purchase receipt and ends 12 months months later provided that the warranty period for any supplies and for any maintenance items included with the printer shall end earlier if it, or its original contents, are substantially used up, depleted, or consumed.

To obtain warranty service you may be required to present proof of original purchase. You may be required to deliver your product to the Remarketer or Lexmark, or ship it prepaid and suitably packaged to a Lexmark designated location. You are responsible for loss of, or damage to, a product in transit to the Remarketer or the Lexmark designated location.

When warranty service involves the exchange of a product or part, the item replaced becomes the property of the Remarketer or Lexmark. The replacement may be a new or repaired item.

The replacement item assumes the remaining warranty period of the original product.

Replacement is not available to you if the product you present for exchange is defaced, altered, in need of a repair not included in warranty service, damaged beyond repair, or if the product is not free of all legal obligations, restrictions, liens, and encumbrances.

Before you present this product for warranty service, remove all toner cartridges, programs, data, and removable storage media (unless directed otherwise by Lexmark).

For further explanation of your warranty alternatives and the nearest Lexmark authorized servicer in your area contact Lexmark on the World Wide Web at **http://support.lexmark.com**.

Remote technical support is provided for this product throughout its warranty period. For products no longer covered by a Lexmark warranty, technical support may not be available or only be available for a fee.

Extent of limited warranty

Lexmark does not warrant uninterrupted or error-free operation of any product or the durability or longevity of prints produced by any product.

Warranty service does not include repair of failures caused by:

- Modification or unauthorized attachments
- Accidents, misuse, abuse or use inconsistent with Lexmark user's guides, manuals, instructions or guidance
- Unsuitable physical or operating environment
- Maintenance by anyone other than Lexmark or a Lexmark authorized servicer
- Operation of a product beyond the limit of its duty cycle
- Use of printing media outside of Lexmark specifications
- Refurbishment, repair, refilling or remanufacture by a third party of products, supplies or parts
- Products, supplies, parts, materials (such as toners and inks), software, or interfaces not furnished by Lexmark

TO THE EXTENT PERMITTED BY APPLICABLE LAW, NEITHER LEXMARK NOR ITS THIRD PARTY SUPPLIERS OR REMARKETERS MAKE ANY OTHER WARRANTY OR CONDITION OF ANY KIND, WHETHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS PRODUCT, AND SPECIFICALLY DISCLAIM THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND SATISFACTORY QUALITY. ANY WARRANTIES THAT MAY NOT BE DISCLAIMED UNDER APPLICABLE LAW ARE LIMITED IN DURATION TO THE WARRANTY PERIOD. NO WARRANTIES, EXPRESS OR IMPLIED, WILL APPLY AFTER THIS PERIOD. ALL INFORMATION, SPECIFICATIONS, PRICES, AND SERVICES ARE SUBJECT TO CHANGE AT ANY TIME WITHOUT NOTICE.

Limitation of liability

Your sole remedy under this limited warranty is set forth in this document. For any claim concerning performance or nonperformance of Lexmark or a Remarketer for this product under this limited warranty, you may recover actual damages up to the limit set forth in the following paragraph.

Lexmark's liability for actual damages from any cause whatsoever will be limited to the amount you paid for the product that caused the damages. This limitation of liability will not apply to claims by you for bodily injury or damage to real property or tangible personal property for which Lexmark is legally liable. **IN NO EVENT WILL LEXMARK BE LIABLE FOR ANY LOST PROFITS, LOST SAVINGS, INCIDENTAL DAMAGE, OR OTHER ECONOMIC OR CONSEQUENTIAL DAMAGES.** This is true even if you advise Lexmark or a Remarketer of the possibility of such damages. Lexmark is not liable for any claim by you based on a third party claim.

This limitation of remedies also applies to claims against any Suppliers and Remarketers of Lexmark. Lexmark's and its Suppliers' and Remarketers' limitations of remedies are not cumulative. Such Suppliers and Remarketers are intended beneficiaries of this limitation.

Additional rights

Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusion or limitation of incidental or consequential damages, so the limitations or exclusions contained above may not apply to you.

This limited warranty gives you specific legal rights. You may also have other rights that vary from state to state.

Index